AIRFIX magazine

MAY, 1967

FOR PLASTIC MODELLERS

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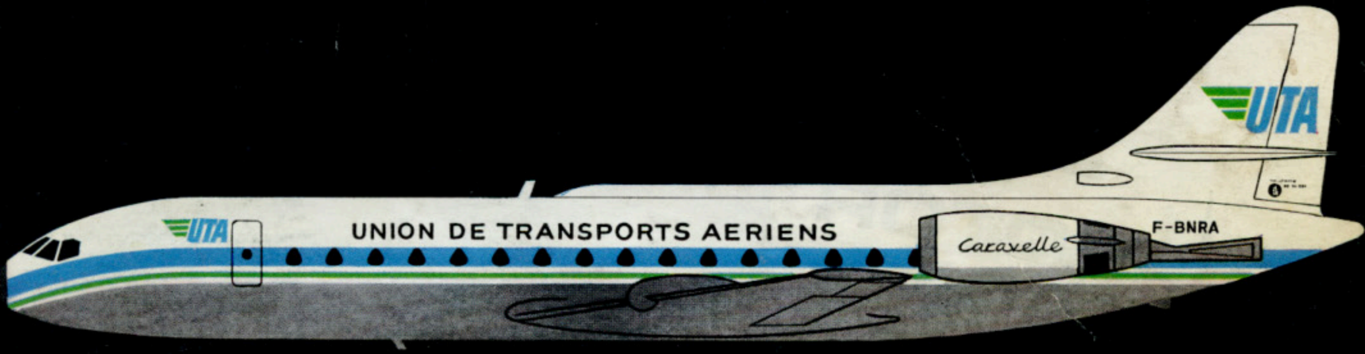
MONTHLY



IN THIS ISSUE

Stirling and Dornier 217 model features
GWR Mogul and Sherman kit conversions

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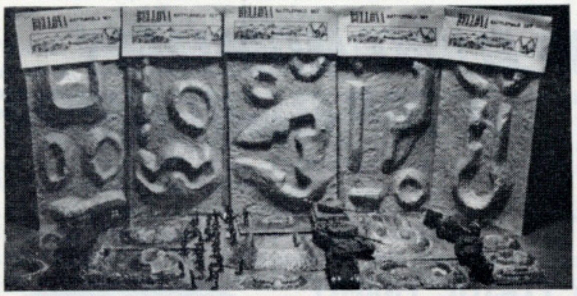

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AIRFIX FOR PLASTIC MODELLERS magazine

Volume 8, Number 9

May, 1967

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COVER PICTURE

We present these useful airliner painting guides for modellers who are looking for colourful alternatives to the markings provided in the respective Airfix 1:144 scale kits. The Caravelle 10R of Union De Transports Aeriens (UTA) also involves some conversion work from the Airfix model, but the striking Braniff BAC One-Eleven is a straight, but tricky, repaint. Drawings by John Stroud.
(Illustrations courtesy AIR BP, the Journal of the International Aviation Service of the British Petroleum Co Ltd, London)

AIRFIX magazine is published for the proprietors, Airfix Products Ltd, by Knightsbridge Publications (1962) Ltd, on the fourth Friday of each month. Annual subscription rate 30s (USA $5.50). Second Class postage paid at New York Post Office, NY.

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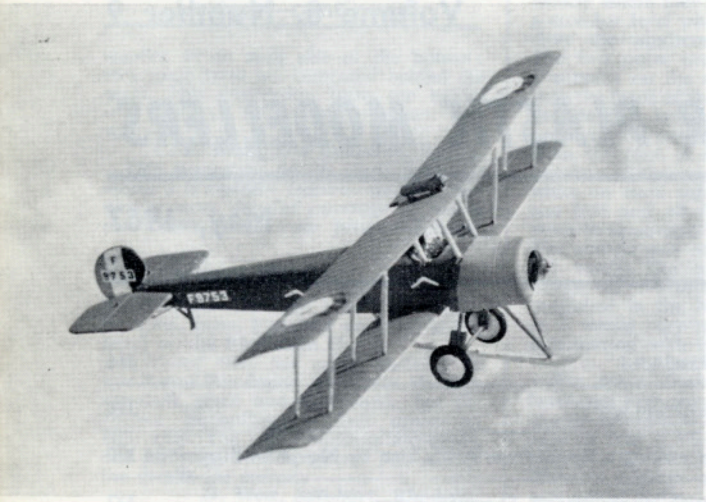
NEXT PUBLICATION DATE: May 26, 1967

EDITORIAL OFFICES AND ADVERTISEMENT DEPARTMENT

3-4 St Andrew's Hill, London, EC4
Telephone: LUDgate Circus 8842

CIRCULATION DEPARTMENT

Surridge Dawson & Co (Productions) Ltd,
Publishing Dept, 26 Aberdour Street, London, SE1
Telephone: BERmondsey 7074/3726



Eagerly awaited addition to the Airfix 1:72 scale range is this fine model of an Avro 504K, one of the longest serving aircraft types in the history of aviation. Markings illustrated are Australian Flying Corps, one of two options in the kit.

NEWS FROM AIRFIX

The world's greatest value in construction kits

- Avro 504K
- Airfix prize winners
- Fiat G.50 bis

●

MODELLING enthusiasts will give a big welcome to the 1:72 scale Avro 504K latest in the large Airfix range of authentic military aircraft kits.

The Avro 504 had what is possibly the longest service life of any aircraft ever built. A direct descendant of A. V. Roe's Series 500 racing aircraft the 504 was designed primarily as a Royal Fying Corps trainer in 1913 and was last in service with the Greek Air Force well into World War 2.

No fewer than 8,340 504s were built and the famous 95 mph model 'K' was produced in Britain, Canada, Australia, Japan, China and Russia. While the 504 was designed as a trainer, several adaptations were made to allow for fighting and bombing operations.

Nearly 40 moulded polystyrene parts are included in this highly detailed model kit. In addition to the easy-to-follow instruction sheet, two sets of transfer markings and a painting guide allow the enthusiast a choice of the RAF and Australian Flying Corps versions.

The kit is priced at 2s 3d.

Readers too young to remember the 504K can see one preserved in flying order by the Shuttleworth Trust at Old Warden. Meanwhile on page 324 of this issue, veteran flyer Grenville Manton recalls his experiences in this immortal machine.

●

MR RALPH EHRMANN, chairman of Airfix Industries Limited and of the British Toy Manufacturers Association, presented the Airfix / MRRC 'Grand Prix' Trophy to 17-year-old Max Collier of Holloway, London, overall winner of a four weeks slot-racing contest held over the Easter period at Selfridges department store in London. There were over 1,000 entries.

Max, making his debut in open competition slot racing, took the Coca-Cola Bottlers Trophy for the best performance in the first week of the contest as well as the overall prize. He

Below: *Mr Ralph Ehrmann (left), chairman of Airfix, presents Max Collier with the Airfix/MRRC 'Grand Prix' Trophy for winning the four weeks long slot-racing contest held at Selfridges.* **Bottom:** *Herbert Poredos, who is in the Austrian army, taking delivery of his prize, a Steyr Puch 500, at Graz.*

has been racing MRRC equipment for three years at the Tottenham Court Road '30's Club'. At Selfridges his Airfix Clubman Special BRM covered 15 laps of the 115 feet circuit in the three minute time limit at an average scale speed of over 200 mph.

Second and third week's prizes presented by BP and Dunlop went to Laird Creevey (10), of Mayfair, and Graham Rose (14), of St Johns Wood. Runners-up and third placers received Airfix/MRRC cars and sets from Mr Ehrmann.

Another Airfix motor racing success story comes from Austria where Herbert Poredos went to the Steyr-Puch works at Graz to take delivery of a brand new Steyr Puch 500 car which was his prize for coming first overall in the National Austrian Airfix Motor Racing Competition held last autumn at the Jochen Rindt Sports and Race Car Show in Vienna. This was reported in the January, 1967, issue of Airfix magazine. The presentation was made by Herr Hladik, chief clerk of the Steyr-Puch works.

●

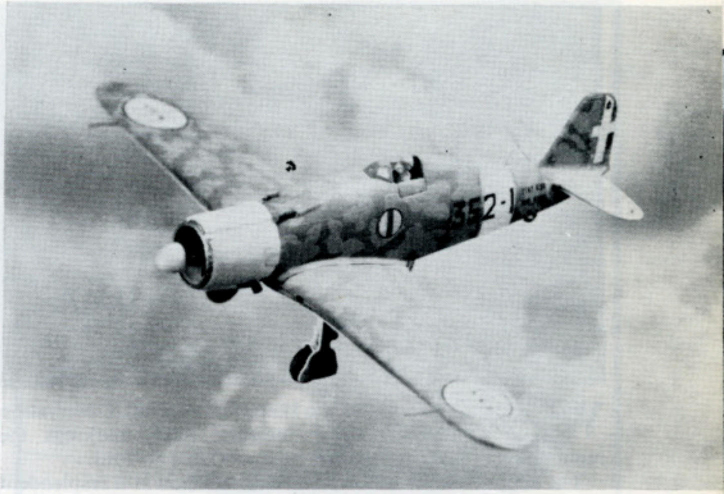
LATEST addition to the Airfix range of more than 50 World War 2 military aircraft kits in 1:72 scale is the Italian Fiat G.50 bis Freccia (Arrow).

The Fiat Freccia got its baptism of fire towards the end of the Spanish Civil War and the modified G.50 bis with an open cockpit appeared soon after Italy entered World War 2.

The G.50 bis proved reliable and extremely manoeuvrable but its 840 hp Fiat radial engine left it under-powered and no match for Allied fighters. Nearly 500 G.50 bis Freccias were built during the war and were used by several of the Axis forces.

Subject of this faithfully detailed 32-part model is one of the aircraft stationed in Belgium for a brief attacking role in the Channel and British Isles theatres of war in 1940. Full assembly instructions, painting suggestions and new style matt transfer markings allow for the construction of a realistic model.

The Fiat G.50 bis Freccia kit is available from Airfix stockists in the Series I range, price 2s 3d.


Above: *First Airfix model of a World War 2 Italian aircraft to be released is this fine replica of the Fiat G.50 bis Freccia, with its distinctive open cockpit. Markings are provided for one of the aircraft based briefly in Belgium for a short period during the Battle of Britain in 1940 when it was decided to allow the Italian Air Force to participate with the Luftwaffe in attacks on England. The units involved were soon withdrawn after suffering heavy losses on the few missions in which they flew. For the first time, Airfix have introduced matt transfers with this kit. Details are also given for the intricate mottled colour scheme.*

BIGGIN HILL AIR FAIR

MORE exhibits and displays than ever before—both of the flying and the static variety—are promised by the organisers of this year's Biggin Hill International Air Fair which takes place from May 11-14 as the now-traditional opening item on the British air display season. As in past years there will be aerobatic displays by service teams, including the Red Arrows in their Gnats and the Belgians in their Stampes, a Commando assault by helicopter, flying displays by service aircraft, and literally scores of commercial and light aircraft. Several preserved aircraft will also be on view. In addition there will be Army and RAF equipment on show and, of course, the opportunity to inspect most of the participating aircraft at close quarters.

Airfix magazine contributors Alan Hall and Dick Ward will once again be presenting their mammoth History of Air Power model aircraft exhibition which they and Dave Cook have built up over the years. More than 1,300 1:72 scale models comprise the collection, many of them plastic and almost all conversions from standard kits. There are in addition a number of scratch-built wooden models. All the actual models featured as conversion subjects in Airfix magazine can be seen in the display, including the Stirling Mk V which is this month's conversion.

Biggin Hill is within easy reach from London by train and Green Line coach.

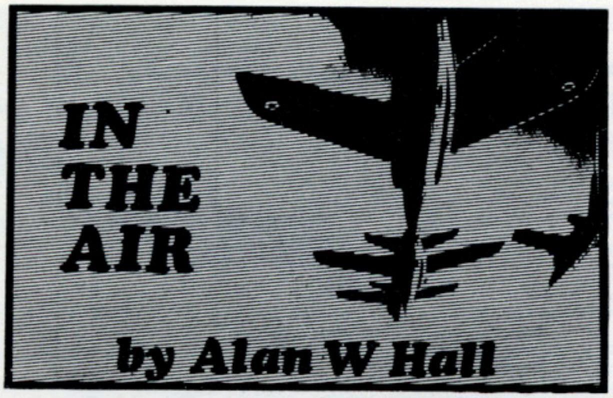
ARE YOU A KIT CONVERTER?

We have many letters from readers requesting back copies of AIRFIX MAGAZINE containing conversion articles. Back copies of some issues are still available for the benefit of readers who may have missed or mislaid earlier editions. For example, here are some of the practical articles which have appeared.

1965: September—Jeep conversions and Battle of Britain colour schemes. **1966: March**—Firefly Profile and Red Army equipment. **April**—Dinah conversion. **June**—Half-track conversion and four-stacker destroyers. **July**—RF-4C Phantom conversion. **August**—Catalina conversions. **September**—Matador variants. **October**—King Tiger and P-51C Mustang. **November**—Sturmtiger conversion. **December**—Me 262 conversions and half-tracks. **1967: January**—Joseph Stalin 2 conversion. **April**—1916 tanks and Me 262.

Would readers please note that all issues ***not*** *listed above are now out of print and can no longer be supplied.*

Back copies cost 2s each (including postage) for all copies up to and including September, 1966. From October, 1966, onwards the cost is 2s 6d an issue, post paid. Please address all requests for back copies, together with your remittance, to our circulation department at SURRIDGE DAWSON & CO (PRODUCTIONS) LTD, PUBLISHING DEPT. 26 ABERDOUR STREET, LONDON SE1. Note the new address.



IN THE AIR

by Alan W Hall

WITH the restoration of the Historical Aircraft Preservation Society's Proctor to its original RAF markings the number of Proctors preserved now amounts to four.

The latest example which now rests at Biggin Hill resplendent in its new colours is NP181. This aircraft was a Mk IV, 250 of which were built by F. Hills and Co, Manchester. Its constructor's number was H8588. In 1955, 60 of these aircraft were declared surplus by the RAF and the example at present refurbished became G-AOAR. It was in turn owned by R. A. Peacock, Continental Aircraft Services Ltd, A. J. Whitemore Aeradio Ltd, A. J. Barwell and Company Ltd, and finally C. V. Thomas and the Airways Aero Club. For several months the aircraft stood in the open at Biggin Hill slowly deteriorating until the Society took pity on it and found the funds to do the repaint job.

Other Proctors still in static captivity include one held by the Northern Aircraft Preservation Society, LZ766 which was restored by the Tamworth Royal Observer Corps group and another, believed to be BV361, which resides in the grounds of a Bristol Grammar School.

It is expected that the HAPS Proctor will be on show together with their other historically interesting aircraft at the International Air Fair to be held at Biggin Hill from May 11-14.

TIGER TEST

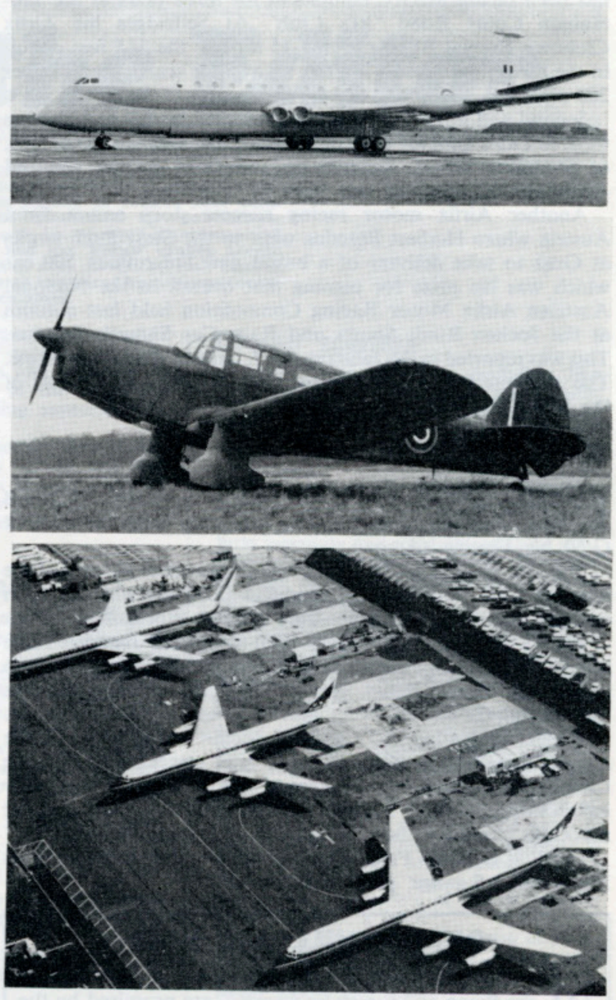
A NEW type of light aircraft competition is being sponsored by the Tiger Club, the association of light aircraft owners and pilots who delight in flying either the ultra-light Turbulent or the venerable old Tiger Moth itself.

Private pilots from all over Britain, because the competition isn't limited to the Tiger Club's own members, will be testing their skill and endurance in a dawn to dusk flying competition during the longest days of the year, between June 14-28.

The object will be to fly as far and as long as possible during the 17 hours of daylight with the object of arriving at the Tiger Club's airfield at Redhill around 9.30 pm. They will record their flight in a special report and the winner will be chosen on a basis of these by the Duke of Edinburgh, who is himself a keen aviator, and a panel of three judges.

The emphasis of the competition will be on personal endeavour and achievement and advanced aircraft or pilot's experience will not necessarily be the deciding factor. Two pilots may fly as a team but there will be a special prize for solo attempts.

Competitions of this type have been held by the Tiger Club before, but this year sees the first of a nation-wide attempt to popularise the 'stay aloft' sport. Previously the ultra-light Turbulents have taken many of the prizes. Powered by a converted motor car engine they have covered up to 1,000 miles during the day with a fuel consumption and average speed better than those of many family saloon cars.



Top to bottom: *The Hawker Siddeley HS 801 maritime reconnaissance aircraft which was rolled out of the company's Chester works recently. This, the first prototype, will fly shortly and will eventually replace the Shackleton in RAF Coastal Command. Proctor NP181, A Mk IV which has recently been returned from its civil markings to the original camouflage scheme in which it was painted when it left the factory of F. Hills and Co. The aircraft has been preserved by the Historical Aircraft Preservation Society and will be on show at the International Air Fair at Biggin Hill in May* (Photo R. W. Cranham). *You pays your money and you takes your choice. . . . Super Sixty series of four engined DC-8 jets at the Douglas company's Long Beach facility. The DC-8 Super 63* (*right*) *is designed to carry 251 passengers on intercontinental flights. DC-8 Super 62* (*centre*) *is the ultra long range version and the Super 61* (*far left*) *in the colours of Eastern Airlines was designed for transcontinental routes.*

There is no geographical limitation in the competition. Pilots can roam all over Europe if they wish providing they return to Redhill by the specified hour in the evening. They can also start from anywhere they wish in Great Britain. Although some may be able to stay airborne for the whole of the 17 hours most aircraft will have to land sometime for fuel. In order to avoid over-hasty turn rounds anyone in the competition who does land will have to spend a minimum of 30 minutes on the ground.

Apart from the flight itself, much of the competition centres on the effective and enterprising planning of the route in relation to weather and other navigational limitations. There will also have to be a clear and detailed log compiled of the flight.

The Tiger Club's competition will do much to foster the steady increase in private flying in this country. It will introduce something of the spirit found in ocean racing by yatchsmen as it provides similar opportunities for achievement and an even greater ability to cover long distances quickly.

FROM SHARKS TO WESSEX

NO 820 Squadron, Royal Navy, is one of the premier anti-submarine units with the fleet and although used mainly in a training role has more recently been fully engaged in the *Torrey Canyon* disaster operating from their home base at RNAS Culdrose.

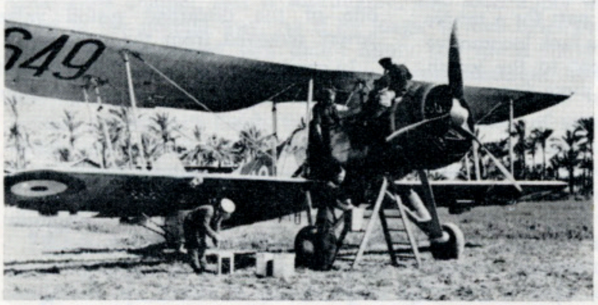
Formed in 1933 from 450 Flight, the Squadron, using Fairey IIIF aircraft, operated from HMS *Courageous* and has since then, apart from a five year break after the war, been continuously in service.

No 820 has always been used as a strike squadron. From the early days of carrying torpedoes through the Second World War, when they served in both the Mediterranean and Pacific, firstly with Swordfish, then Albacores and Barracudas the squadron has been in the thick of the fight. They took part in operations covering the 'Torch' landings in North Africa, attacked enemy surface forces, the *Tirpitz*, *Bismarck*, *Scharnhorst* and *Gneisenau* and later in the war, when equipped with Avengers, took part in attacks on Palembang, Sumatra.

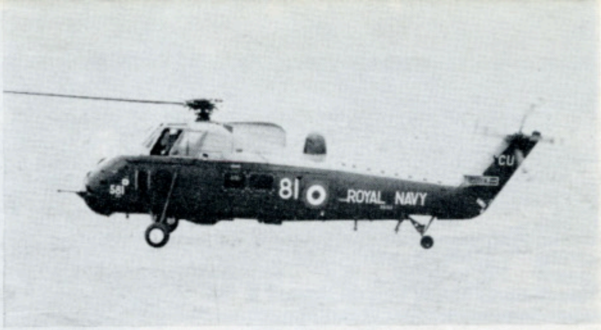
The squadron was disbanded from March 16, 1946, until July, 1951, when it was taken off the shelf and re-formed at RNAS Eglington with eight Firefly Vs in preparation for active service in HMS *Eagle*.

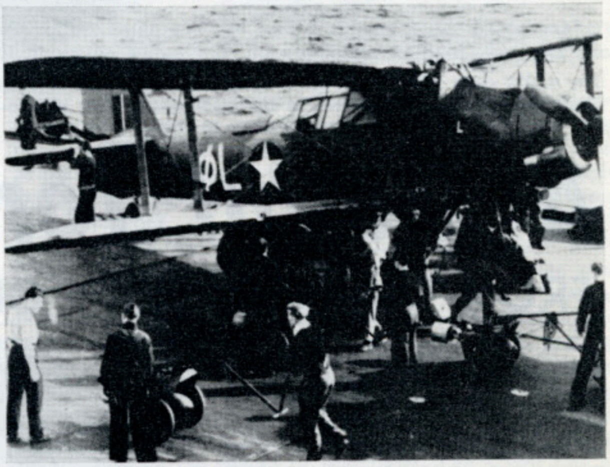
I was recently privileged to see some of the photographs at present in the squadron's line book. Like most units who have a fairly long history they seem to acquire many photographs which never get into print and some of these are most rare and as can be seen from these published. The Swordfish photograph amply illustrates the use of underwing codes on pre-war Naval aircraft. These are not often seen and the position of them—right on the wing tip—is worthy of note.

The second photograph of the Albacore is indeed a rare one. Apart from the almost unique squadron code marking of 820 the RAF/RN roundel has been painted out and a US star superimposed. These markings were used by Allied forces during operation 'Torch'—the landings in North Africa. All Allied aircraft were painted in this manner; readers will recall seeing photographs of Hurricanes similarly painted, the idea being to counter the anti-British feeling then prevalent in this Vichy-administered area.



This photograph of a Swordfish of 820 Squadron refuelling from 4 gallon tins at Aboukir before the war shows well the underwing markings common to most Naval aircraft at that time. Like the Albacore picture, this is from 820 Sqn's line book.





Top: *In service with IFDU at Culdrose is the latest mark of Wessex anti-submarine helicopter. An additional fin behind the cockpit, a dorsal radar mounting and a nose probe seem to be the main additions apart from internal equipment. Aircraft with the unit are at present working up for squadron use. Colours appear to be the standard dark blue and yellow of Naval anti-submarine helicopters* (MOD photograph). **Above:** *Strange markings on a well-known aircraft. An Albacore of No 820 Squadron taking part in the North African landings displays the distinctive squadron code and a US star over the roundel.*

U-2 AT BEDFORD

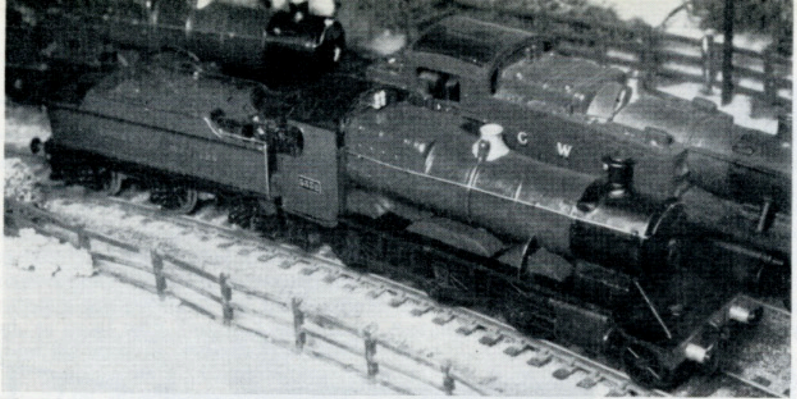
ONE of the much-publicised Lockheed U-2 high altitude research aircraft has been based at RAE Bedford in recent weeks to assist in research programmes at present being conducted here and in America into clear-air turbulence. Much has yet to be learned about this subject which has been known to cause hitherto inexplicable accidents to aircraft. The U-2 which will be flown by its USAF pilot, Capt Ken Mason, will remain at Bedford for two months.

HS 801 ROLLOUT

HAWKER Siddeley's Shackleton replacement, the HS801, has been structurally completed at the company's Chester plant.

The aircraft which is the first pure jet maritime reconnaissance aircraft will be powered with four Rolls Royce Spey engines and employs a Comet 4 wing structure. The HS801 is designed to fly at high subsonic speeds and high altitude to a search area and then use its low-speed low-level patrol capability before a fast return to base. A wide range of military weapons will be carried.

A second prototype is under construction at Woodford, Cheshire and will fly shortly after the present aircraft.



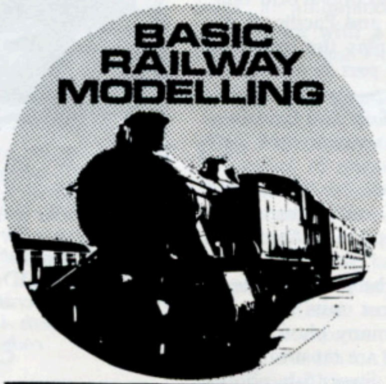
The 43XX class Mogul seen in the foreground here was built from the Airfix City of Truro *and Prairie models seen in the background. This article—first of two—shows how to do it.*

A Mogul for your layout

FROM THE AIRFIX 'CITY OF TRURO' AND PRAIRIE KITS

CONSTRUCTION of a GWR 43XX Class 2-6-0 using parts from the Airfix *City of Truro* and Prairie Tank kits cannot be claimed as original. At least one of our readers, Mr D. W. Beard of Cambridge has already built such a model and a photograph was published in the November, 1965, issue of AIRFIX magazine. So far as I am aware, however, such a conversion has not been fully described in these pages and the following description is how I found it could be done.

Basically the conversion involves marrying the boiler from *City of Truro* with the chassis from the Airfix Prairie tank. The Great Western was a great outfit for standardisation and it so happens that the 'City' boiler, Standard No 4, Type D3, was the same as that used in the 43XX Class and the driving wheel diameter, 5 ft 8 inches and wheel spacings were also the same. Cylinders were only slightly different; 18½ inches × 30 inches in the 43XX and 18 inches × 30 inches in the 61XX Prairie. The 43XX Class of locomotive is well worth modelling as at one time there were over 300 in service and it is very representative of the GWR. It first appeared in 1911 and the last one was withdrawn only a short while ago in November, 1964. In service they had a wide range of duties on both passenger and freight trains and they were very common on the rural branch lines in Wales and the West Country. the sort of line so much favoured by modellers.



BY **NORMAN SIMMONS**

The key to this conversion is the footplate, part number 9 from the Prairie tank kit. If you get this right, almost everything else fits nicely into place. The modifications required to this part are better illustrated than described and the plan view in Figure 1 shows where cuts should be made and which parts should be removed. The net result of these modifications is removal of the footplate below the coal bunker to fit the part for a tender locomotive instead of a tank locomotive and also an adjustment to the length of the stepped down piece forward of the cylinders. On most of the 43XX Class locomotives this latter part was longer than on the 61XX Prairie and Figures 2(a) and 2(b) illustrate this point. It will be seen that a strip 3 mm long, part D in the plan view Fig 1, is cut from the discarded portion of the footplate under the bunker and cemented between A and B. It should also be noted that the front projection of the piston valve cover forward of the cylinders should be removed. The front of the mainframes, parts 1 and 1A, also have to be modified because we shall be fitting scale diameter wheels for the front pony truck (parts 28 and 28A from the Prairie tank kit instead of parts 23 and 23A) and figure 2(b) illustrates this.

Now assemble the chassis and motion as in stages 1 to 17 and 35 to 40 of the instruction sheet, not forgetting to change the front wheels as referred to above. Splashers for the centre driving wheels have to be made and these can be constructed out of plastic card. The splasher on the near side can be made by following the pattern of the other two but on the offside the splasher is very much longer, finishing up just 2 mm short of the forward splasher. The small dome on the front step-down of the footplate should be removed and another one made and fitted so that it is immediately above the axle of the front pony truck. I found a conveniently sized piece of plastic sprue in my kit to make this part and I mounted it on a circle of plastic card punched with an office double-hole filing punch. An alternative to this is to make use of one of the discarded piston valve covers removed from the cylinders.

In coming to the boiler I recommend fitting handrails and smoke box door

Fig 3

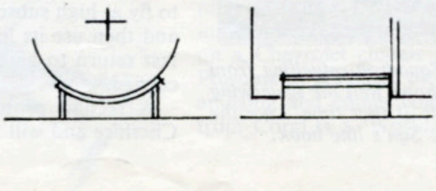


Fig 5 ▶

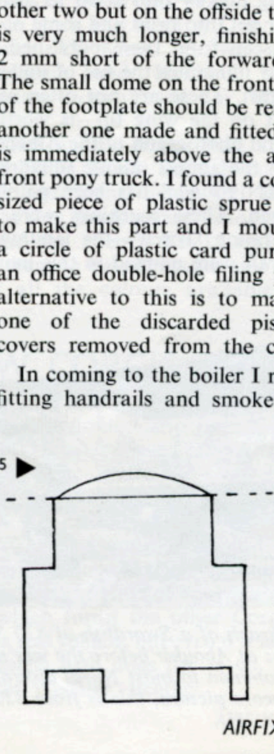
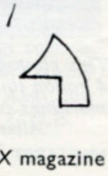


Fig 6



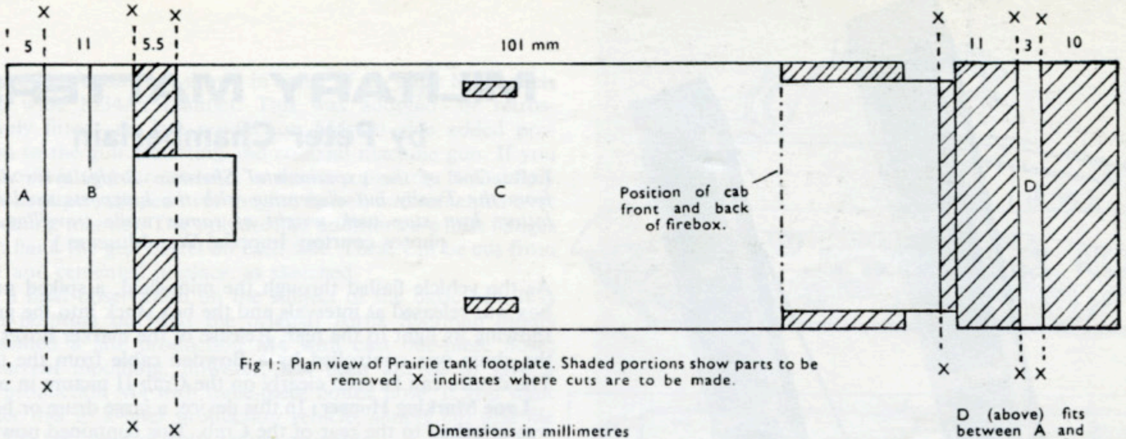


Fig 1: Plan view of Prairie tank footplate. Shaded portions show parts to be removed. X indicates where cuts are to be made.

Dimensions in millimetres

D (above) fits between A and B. See fig 2b, below centre.

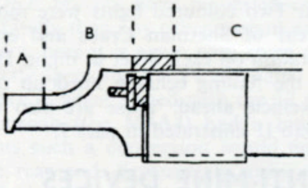


Fig 2a: Layout of cylinder and front mainframe of Prairie.

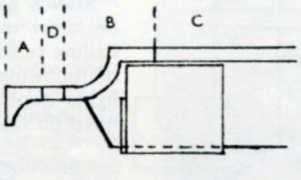
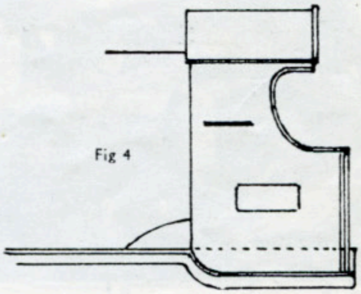


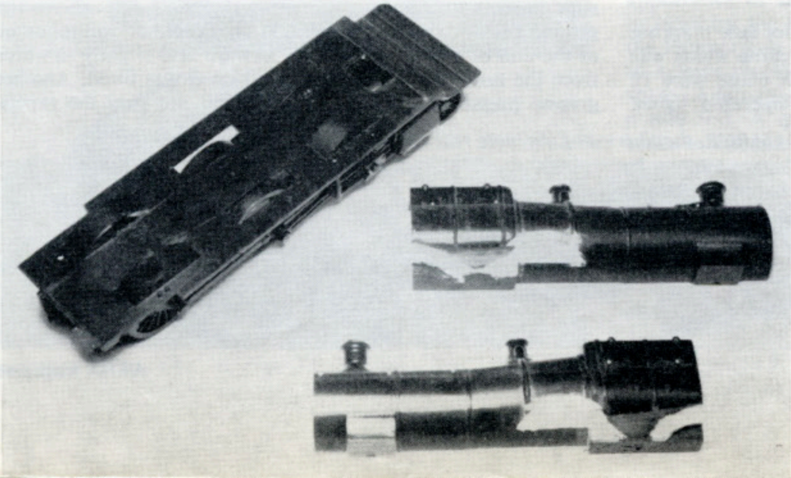
Fig 2b: Cylinder and front mainframe as modified for 2-6-0.



All drawings are keyed to references in text; the small letters on the drawings above should be used to interpret the diagrams and are also referred to briefly in the text

handles as described in the February, 1967, issue of AIRFIX magazine and I suggest you make what alterations are required before proceeding further. After completing the boiler assembly the depressions in the boiler and firebox sides, which in the Airfix kit are designed to clear the splashers and nameplates for the *City of Truro*, should be filled in with plastic putty, plastic wood or any other suitable filling material. Part of this filling will afterwards have to be removed to clear the rear splashers. You can keep the *City of Truro* chimney if you like—it doesn't look so outrageous but it is in fact too far forward and really not quite the right shape. A proper 43XX class chimney costs only 9d (plus postage of course) from K's of Willesden and if fitted with its centre 12 mm from the front of the smokebox will cure all the faults. The gaping hole left after removal of the 'City' chimney I filled in with plastic putty and smoothed to shape. The safety valve cover needs to be reduced in height by about 1 mm. I simply cut the top off, filed away the necessary material and stuck the top back in place again. A trim up with a file and a drill to open out the centre brought the cover back to shape again.

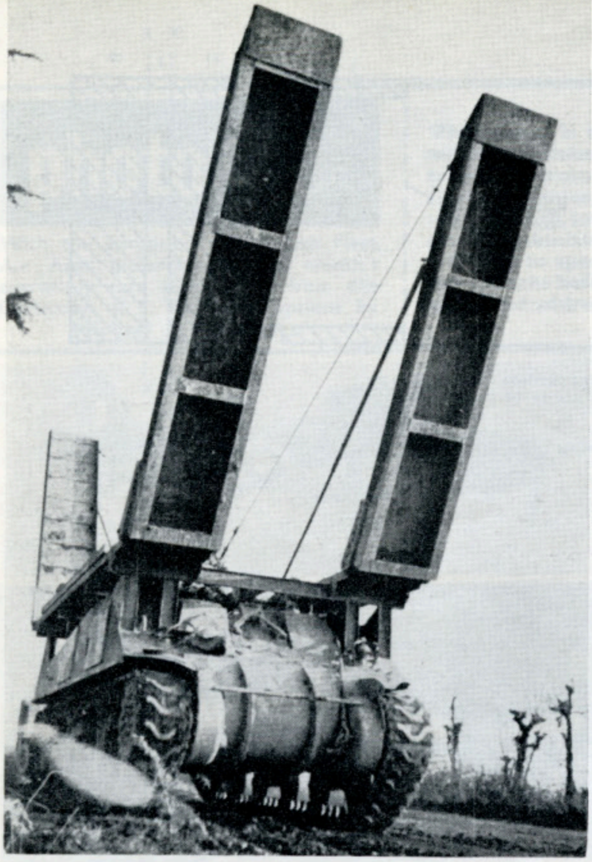
Below: *The main components of the conversion showing the new 2-6-0 chassis made from the Prairie tank and the modified 'City' boiler halves. Study this picture in relation to the working drawings given here.*



It is necessary to lower the boiler slightly and about ½ mm should be filed off from beneath the firebox. The inside corners to the tops of the front and centre splashers will need trimming so that the boiler sits comfortably in place. The smokebox saddle should be removed altogether and a new one scratch built out of plastic card. This is illustrated at Figure 3. I built mine by first curving a piece of .020 inch plastic card and fitting it centrally beneath the smokebox. The two side pieces were each cemented either side and the space between filled with plastic putty. An alternative to this is to use the smokebox saddle from the Prairie Tank kit and since this is fitted with outside steampipes, this leads me to mentioning some prototype information.

Some of the 43XX Class were built with outside steam pipes and some were built without them and had them fitted later. Most of them did not have outside steam pipes at all. One needs to be careful when choosing an engraved numberplate to pick the right locomotive and also the right period according to the livery chosen. The following list of 43XX Class numbers in the 'Kings Cross' range of numberplates obtain-

Continued on page 325



MILITARY MATTERS

by Peter Chamberlain

Left: *One of the experimental Sherman Bridgelayers derived from the Twaby but dispensing with the kingposts used in the latter. Iron stay took weight of ramps while travelling.* (All photos courtesy Imperial War Museum.)

THE SHERMAN STORY

PART 8: BRITISH EXPERIMENTAL VERSIONS

WHILE the principal Sherman-fitted anti-mine devices were described in part 7, there were many other important equipments developed for the mine clearing role to which the Sherman was adapted by the British. These were fitted mainly as an aid to indicating areas swept clear of mines.

Whyman Mechanical Lane Marker: This was evolved in 1944 for marking flailed lanes through a minefield and was fitted to flail tanks and AVREs. It consisted of two banks of 12 firing tubes mounted on each side at the rear of the tank. Each firing tube was fitted with a flagged picket and at intervals a picket was fired into the ground by means of a ballistic cartridge. The 7 ft long picket penetrated 12 inches into the ground and remained upright to display the flag and so mark the lane through which the tank had just flailed.

Mine-field Marking Lights: Evolved in 1943 for lane marking by flail tanks, this device consisted of a small chute which was fitted either side at rear of the Crab. In each chute were 12 spiked oblong boxes that contained battery-operated lights. As the vehicle flailed through the mine-field, a spiked marker box was released at intervals and the box stuck into the ground showing its light to the rear. Release of the marker boxes from the chute was controlled by a Bowden cable from the turret. The chutes can be seen clearly on the Crab II picture in part 7.

Lane Marking Hopper: In this device, a large drum or hopper was attached to the rear of the Crab. This contained powdered chalk which was released at intervals by mechanical means to leave a chalk trail on the ground indicating the path of entry to the swept lane.

Station Keeping Lights: Two coloured lights were mounted on short tubes at the rear of Sherman Crabs and enabled flailing vehicles to keep station on each other at night. Drivers of following vehicles in the flailing echelon lined up on the lights displayed by the vehicle ahead. These are also visible fitted on the Sherman Crab II illustrated in part 7.

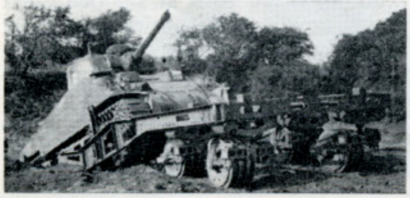
OTHER ANTI-MINE DEVICES

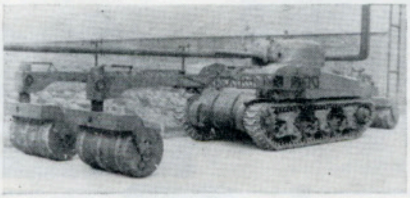
Many experimental devices were also evolved for mine clearing work. Some, like the CIRD, saw limited operational use. The various equipments are summarised here.

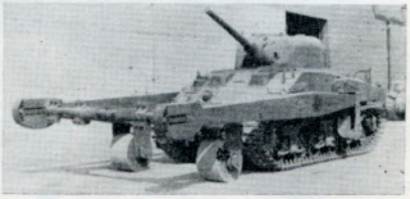
Sherman CIRD: CIRD stood for Canadian Indestructible Roller Device and, as its name implies, was evolved by the Canadian Army in September, 1943. Two types of roller were used, 15½ and 18 inches in diameter. The device consisted of two heavy rollers of one or other of these sizes attached to roller arms fitted between side arms that extended in front of the vehicle. When a roller passed over a mine, detonating it by pressure, the blast caused the roller to jump up in the air and describe an arc about the cross-bar. This motion induced the spade end of the roller arm to dig into the ground. By a mechanical arrangement, plus the motion of the tank, the roller returned to its original position. Some variations on CIRD employment were mentioned in part 7.

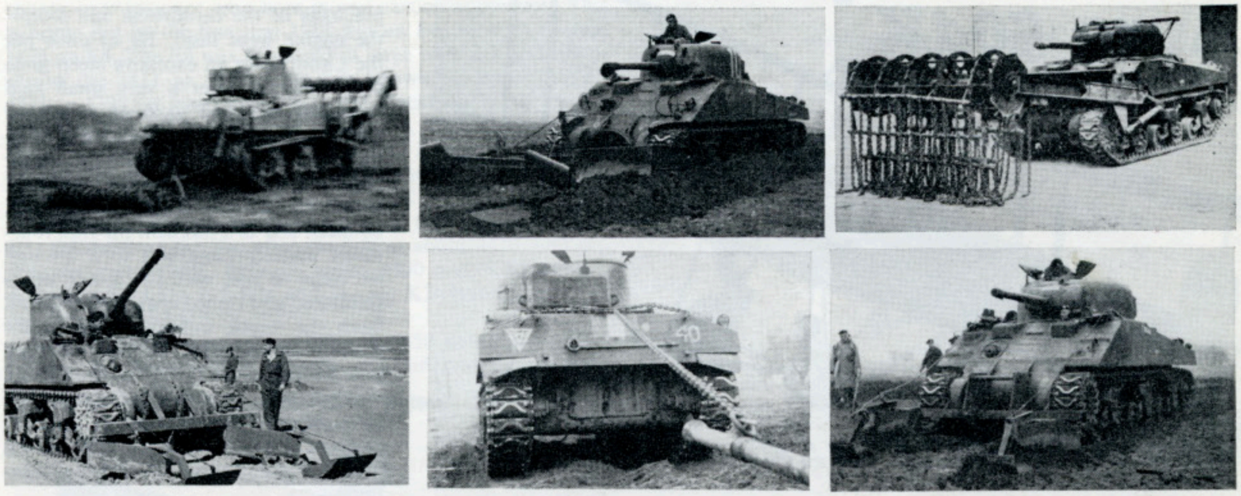
Porcupine: Developed in 1943, this device consisted of a pair of spiked rollers trailed one in front of each track by a steel wire rope harness attached to a cross-bar carried 7 ft above the ground and 8 ft ahead of the tank. The cross-bar was mounted at the end of a beam projecting forward and slightly upwards from the nose of the Sherman to which it was fitted. Another ground pressure exploding device, it did not pass the experi-

Below, left to right: *The Sherman AMRCR, the Sherman Lulu (note rear roller), and the standard CIRD.*









Top row, left to right: *A Sherman Crab towing Centipede rollers at speed; the Sherman Bullshorn Plough; the Sherman Lobster, described in part 7.* **Above, left to right:** *The Sherman Jeffries Plough under test on a beach; Sherman towing a Snake (described in part 7); the Sherman MDI Plough. Note detail differences in all these plough devices.*

mental stage.

Sherman AMRCR: AMRCR stood for Anti-Mine Reconnaissance Castor Rollers, and this was a perambulator device attached to, and pushed in front of, the vehicle. It consisted of a heavy frame extended in front of the Sherman and attached to two arms fitted on each side. Suspended from the frame were four sets of rollers, one to each corner.

Sherman Lulu: An experimental electrically operated mine detector developed in 1943, the Lulu (originally called Zulu) consisted of three 4 ft wooden rollers set in a triangular pattern. The two front rollers were attached to a light girder of wood and metal lattice construction, and projected 11 ft ahead of the tank. The third roller was towed behind on an 8 ft girder. Each roller contained a mine detector coil which was in turn wired to an indicator unit inside the tank.

Sherman with Centipede rollers: Evolved in May, 1943, for the specific clearance of German anti-personnel 'S' mines—which flail chains often missed—the Centipede consisted of 12 rollers on parallel bars towed behind a Sherman Crab. Each roller was made of concrete, had steel tyres, and weighed 30 lb.

Sherman Ploughs: Various types of anti-mine ploughs went through the experimental phase, including the Jeffries, the MDI, and the Bullshorn. Though slightly different in construction these all worked on the same principle of lifting the mines and deflecting them outwards to left and right of the ploughing vehicle.

BRIDGING EQUIPMENT

While the Sherman formed the basis for a number of experimental bridging devices, it was not used operationally as a bridging vehicle. This was left to the Churchill which proved more suitable by virtue of its more regular hull shape and lower profile.

Sherman Twaby: This was a turretless chassis with short folding ramps at each end and ramps across the hull from front to rear. Kingposts held up the ramps until the vehicle was driven into position, when the ramps and the kingposts were lowered. The complete assembly formed a bridge across a river or ditch. The same idea was used on the better-known Churchill ARK.

Sherman ARK: This was similar to the Twaby but had longer lattice girder ramps.

Sherman Plymouth: This was a section of Bailey Bridge mounted on a Sherman chassis. Not used in the field, though a similar idea was seen in the 'dumb' tracked Bailey Bridge which utilised a small tracked chassis and was towed or pushed into position.

Sherman Bridgelayers: At least two variants were developed—one had a long double girder bridge carried from the bows on a heavy A-frame (as in the Churchill AVRE with SBG bridge) and the other had a short double girder bridge supported fore and aft from a centrally mounted girder and stays.

KANGAROOS

Kangaroos were extemporised armoured personnel carriers developed from an idea advocated by the Canadians in 1943-44. In view of their limitations—no overhead cover and no way for the infantry on board to use their small arms from inside—these were very successful as a means of getting infantry across fire-swept ground in support of armour in the fighting in NW Europe and Italy in 1944-45.

Sherman Kangaroo: The turret was removed, infantry wireless was fitted, and seats provided for a section of troops (ie, 10 men) plus a crew of two. Seventy-five were converted of various Sherman marks in 1944-45.

Ram Kangaroos: These were redundant Canadian Ram Mk IIs (displaced as gun tanks by Shermans) and adapted as for the Sherman Kangaroo.

Priest Kangaroo: The 105 mm howitzer was removed and the embrasure plated in. Twenty infantrymen plus a crew of two could be carried.

GUN TOWERS

A number of redundant Ram IIs were converted as for Kangaroos (see above) but used as tractors for the 17 pdr wheeled anti-tank gun. Crew were carried in the vehicle. Similarly, a number of M10 Achilles in British service had their turrets removed and were used as tractors for larger calibre guns such as the 155 mm 'Long Tom'. In 1945, a total of 120 Shermans were radically altered by Vickers—with shortened chassis among many other changes—and supplied to BAOR as gun tractors. Subsequently they were sold to the Federal German Government for use as agricultural tractors. These were known as Shervicks.

(Continued next month)

Memories of the Avro 504K

by GRENVILLE MANTON

THOSE of us who served in the first world war as pilots in the Royal Flying Corps will always remember the Avro 504K, that doughty tractor biplane which became our standard trainer.

And, in particular, those who had been selected to become flying instructors and so underwent the famous Gosport system of advanced flying training devised by the celebrated Colonel Smith-Barry retain lively recollections of the '504' and its incomparable qualities which put it in a class by itself. Its nimbleness and lightness of control were extraordinary considering its size—the span was 36 feet and the length was 29 feet 5 inches—and the nine-cylinder Gnome Monosoupape rotary engine yielded 100 hp so that the machine had no excess of power. Yet it was fully aerobatic.

When I first became acquainted with the 'Mono Avro' (the name by which it was commonly known) in 1917, I was very much of a novice having logged only about seven hours in the air previously at a civilian flying school to which I had been posted to receive my initial flying training. The aircraft used there were pre-war type Caudron G.2 tractor biplanes powered with 50 hp Gnome rotary engines. These quaint machines were constructed with a 'warp' control system by which longitudinal control was obtained not by hinged elevators but by flexing the trailing edge of the tailplane, and lateral control was brought about by warping part of the trailing edges of the top planes. Instructor and pupil sat in a shallow nacelle and there were no safety belts, no flight instruments, and no windscreen! As no speaking tubes were provided, the instructor and pupil could not converse in the air and the latter was directed solely by movements of the instructor's left hand.

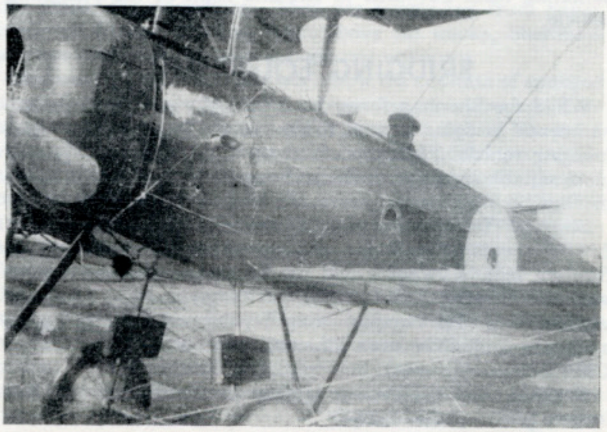
This method of teaching people to fly was sketchy to say the least. Yet those of us who showed any promise were sent off solo in the quickest possible time. I had spent a little over three hours in the air seeking to master the art and then one morning my instructor, who was a Frenchman, blandly announced to me, 'You've done three hours. That is enough. (pause)—you go up now and if you crash, you no bloody good!'

On reflection, I think he might have added some reference to the fact that on my second flight with him he had demonstrated how *not* to carry out a forced landing. We had taken off, gained a few hundreds of feet over the precincts of the aerodrome and then—the engine went dead. He at once put the Caudron in an excessive steep glide and aimed to enter a very small field adjoining the coal yard of a railway station at Acton. Why he chose it when there were others a great deal larger nearby I shall never know. At high speed the aircraft struck the ground, bounced and in a moment the frail four-wheel undercarriage was torn off and we came to rest with the lower wings splintered and ripped apart. We emerged from the wreck unhurt though a bit shaken. Immediately we were engaged in a hot argument for he asserted that I was primarily to blame because I must have knocked the ignition to the 'off' position with my elbow. This being untrue, I indignantly denied his accusation!

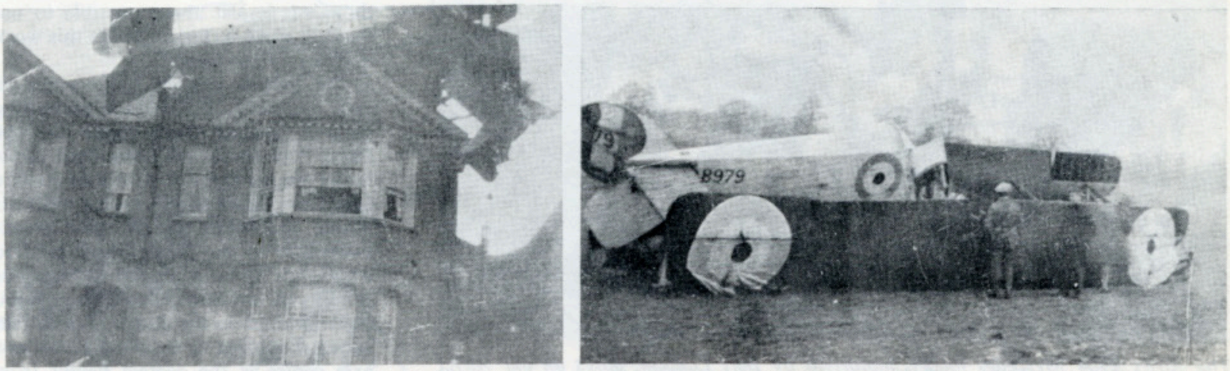
Though the fellow's manner in directing me to go solo hardly provided me with the sort of encouragement which any pupil likes at such a time, I was not sorry or greatly deterred when I took off in that old Caudron alone that morning. I duly passed the prescribed tests which qualified me for the RAeC 'aviator's certificate' and shortly afterwards I was posted to an RFC station in Norfolk.

There I saw an Avro 504K at close quarters for the first time, and there I soon had my first taste of flying with a highly proficient Service pilot. The contrast between the cockpit of the Avro and the primitive nacelle (not unlike a sidecar) of the Caudron seemed immense. There was a comfortable cushioned bucket seat, a high well-padded decking, a neat windscreen and a substantial safety belt of green webbing. The control column was of just the right proportions with a blip-switch at the top and the rudder-bar had foot rests which added to the ease

Heading: *The Shuttleworth collection's preserved Avro 504K in flight* (Photo by Peter Saunders, courtesy Shuttleworth Trust).



Right: *The writer seated in an Avro 504 at Waddon, Surrey, in 1918. The engine is a Clerget (130 hp) which, with the Le Rhone (110 hp), largely replaced the Gnome Monosoupape during the closing stages of the war.*



Picture on the left was taken at Bushey, Herts (my home town). A pilot stationed at London Colney was doing low-level aerobatics when the Monosoupape cut out. He attempted to land in a field, overshot and finished up (as shown) on the roof of a house! The local residents were astonished to see him extricate himself from the cockpit and wait for a ladder! (Incidentally, someone rushed to my home to annouce that I had crashed. This false report spread, no doubt, because I used to fly over Bushey occasionally.) Photograph on the right is of a crash at Shawbury. The aircraft was one used by a pupil on his first solo. He stalled on take-off and was very seriously injured but recovered after a lengthy spell in hospital. He had borrowed my flying helmet which I never saw again. In World War 2 I saw him in the RAF Club. I asked him to return my head-gear but he had no recollection of borrowing it!

of operating it. There were six instruments in that cockpit I remember. They were (1) air speed indicator, (2) altimeter, (3) engine revolutions indicator, (4) fuel-tank pressure gauge, (5) cross level 'bubble', and (6) compass. The roominess and decor of the cockpit seemed impressive to me and when the pilot took off with a magnificent climbing turn over the Bessenau hangars and then put the Mono Avro into a near-vertical bank, I was filled with awe. I recall hearing his voice reaching my ears via the 'Gosport' speaking tubes. With mock solemnity he said, 'Well, now you've entered this flying lark, observe, my dear boy, the position of this machine in the air'.

The weeks passed quickly and, stage by stage, I gained experience and confidence. At the same time I developed a regard and a sort of affection for that remarkable machine I was flying as a prelude to my piloting the Sopwith Pup and then the Sopwith Camel.

Some months before the war came to its end, I found myself flying the Avro 504 again, this time when I was engaged in an advanced flying course which was designed, as I have said, by Smith-Barry, to give us absolute mastery over the aircraft in all conditions of flight. So under the guidance of some masters of the 'art', I acquired to the best of my ability the techniques of looping, rolling, spinning and of carrying out that very tricky manoeuvre, the falling leaf. The curriculum did not end there. We were taught how to do tail-swish approaches, side-slip landings, landings across wind, and spot-landings in which we placed our Avros down within a few feet of a predetermined spot.

To the onlooker these operations were always fascinating to watch and to the pilot they brought a deal of satisfaction. Of one thing I am certain and that is that in those days this great finesse in handling would not have been possible but for that splendid old work horse of the air, the Avro 504K. It is no surprise then that, after all these years, this machine is well remembered. Now that Airfix is marketing an Avro 504K kit I am sure that when people like myself see the aircraft presented in model form we shall experience a feeling of pronounced nostalgia.

Mogul—continued

able from the Model Railway (Mfg) Company Ltd, indicates which locomotives were fitted with outside steampipes and when:

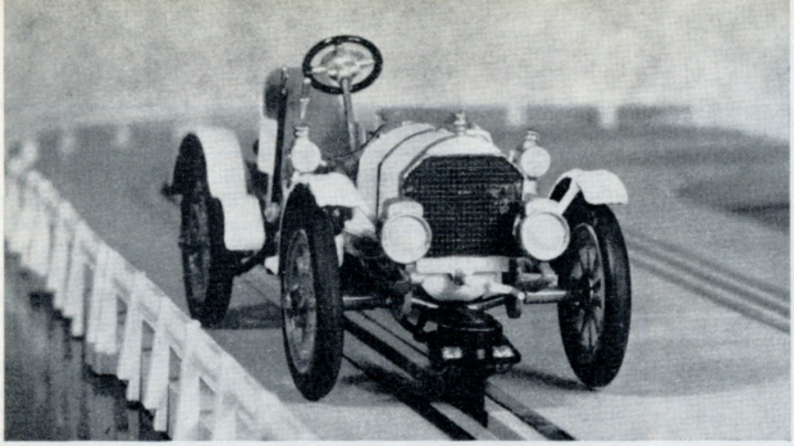
No	Built	Outside Steam Pipes	Withdrawn
4318	1911	-	1952
4371	1915	–	1938
4375	1915	1941	1958
5332	1917	–	1961
5386	1920	–	1958
6302	1920	–	1962
6307	1921	1944	1960
6325	1921	1950	1959
6329	1921	1953	1961
6363	1925	Built	1964
6379	1921	–	1963
6395	1921	1950	1964
7316	1921	1948	1962

NB.—5332 and 5386 were renumbered 8332 and 8386 respectively between 1928 and 1944. 6395 was the last of the class withdrawn in November, 1964.

Figure 4 shows a side view of the cab. This can be built up by adding plastic card to the Airfix *City of Truro* cab sides but I preferred to cut new sides from .030 inch plastic card. The driver's lookouts in the sides I cut slightly oversize to allow for a thin strip of .010 inch plastic card to be cemented around the edge to represent beading. The tail of this strip was left about 2 mm at the end to fix the top of the vertical handrail which was made from plastic sprue heated and stretched over a candle flame. I used the Prairie tank cab front, part 11, but adapted it to take a higher curved roof (the same contour as *City of Truro*) by cutting the top off level and fitting a piece of plastic card cut to the correct shape. Figure 5 illustrates this. The cab front should be cemented immediately forward of the first of the two locating pins on the footplate. Normally, of course, with the Prairie tank the cab front fits between these two pins. The roof was made from two pieces of .020 inch plastic card cemented together. Two thin pieces were used in preference to one thick piece because when they are cemented together they keep their shape. Rain strips at the sides and end were made from thin strips of .010 inch plastic card fixed with liquid cement. The cab steps were cut from the Prairie tank sides.

With the cab fitted, the boiler can be offered up and cemented in place. The *City of Truro* whistles and the Prairie boiler stays, parts 31, can be fitted. Two 'wing' plates (Figure 6) made of .020 inch plastic card were cemented edge on to the centre of the front driving wheel splashers.

The *City of Truro* tender can be used to complete the model but really this needs modifying as I hope to show, together with details of liveries, etc, in the next article in this series.



The Airfix 1904 Mercedes model, motorised by Bert Lamkin, poses on our Airfix circuit. Standard Airfix motor and MRRC guide shoe are used, and this picture shows the new front axle formed from metal rod.

Motorise the Mercedes

SECOND IN OUR SERIES OF VETERAN SLOT-RACER PROJECTS

BY BERT LAMKIN

SECOND on our list of suitable motorisation subjects from the Airfix range of vintage and veteran 1:32 scale car kits is our old friend the 1904 Mercedes, a very typical racing car of the Edwardian era. It makes a very good competitor to the racing De Dietrich which we dealt with in our March, 1967, issue and motorising the two will provide some enjoyable racing, as a change from modern cars, on the average twin-lane home built slot layout.

As with the De Dietrich, your first move with work on the Mercedes is to paint as many parts as possible before assembly, thus obviating a lot of fiddling work later on. Exclude the wheels from this schedule and make a start on the conversion work by removing the plastic moulded tyres on an extemporised lathe in the manner mentioned for the De Dietrich and described in detail by Norman Simmons in his Matador conversion article in the October, 1966, issue of AIRFIX magazine. Once the plastic tyres have been skimmed down to the wheel rims, file or cut a very shallow V-shaped depression round the rims to give a grip for the rubber tyres which must now be added. These are made from rubber rings sold in umbrella repair shops and are cemented in position round the rims using UHU or impact adhesive.

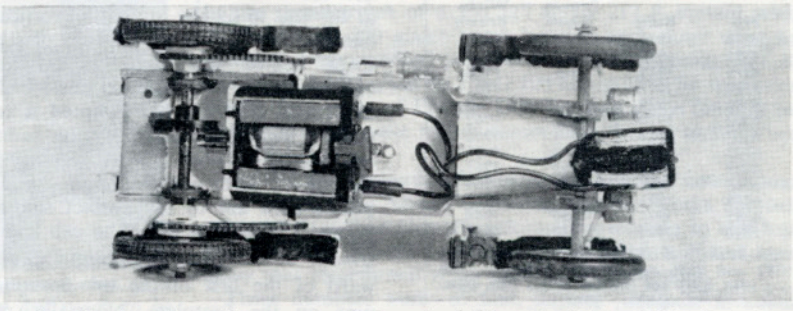
Assembly follows the kit instructions from stages 1—5 and then jumps to stage 7. When the cement has hardened thoroughly the new back axle assembly can be installed. The rear axle is entirely new and consists of a 2 inch length of $\frac{3}{32}$ inch diameter rod. About $\frac{1}{4}$ inch at each end is reduced in diameter to take an 8 BA thread and if you are lucky enough to own a lathe this will be no problem. If not you may have a friend who can do the job for you, though it is just about possible to use the drill stock technique to do this work if you are very careful.

The axle is carried by two plastic card supports, but before cementing them in position the contrate must be fitted. This comes off a standard Airfix motor racing axle—available as a spare item from Airfix motor racing stockists—and is located on the new home-made axle by the centre-punch method which has been described in previous Wheelspin articles. Next file a semi-circular notch in the centre of each rear spring moulding to ensure that the new axle centre is the correct height from the ground. Slip the new plastic card supports over the axle and cement them in position on the inside of the springs. Sketch B gives the details.

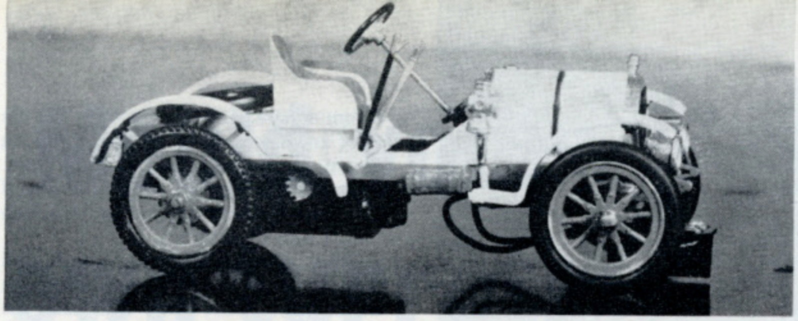
The standard Airfix motor, required to provide the power, is mounted on the chassis in the same way as described for the De Dietrich. A strip of $\frac{1}{16}$ inch thick plastic card, with notches filed into it to register with the motor lugs, locates the pinion end. Another strip, cemented under the chassis keeps the motor horizontal and a metal bracket is bolted to the chassis to hold the motor in place. Sketch C illustrates the arrangement very clearly.

To complete the rear axle assembly, the chain drives, parts 12 and 13, are slipped on to the axle, the hole in the larger sprocket being opened to allow the shaft to rotate freely. The stub axles on part 14 are cut off and cemented to the chassis to register with the hole in the small sprocket. This can then be cemented to the stub.

The hubs of the rear wheels are tapped 8 BA and threaded on to the



Underside view shows the very simple layout of this motorisation. Note the cut-out in the fuel tank to accommodate the contrate. The plastic card axle supports are seen inside the chassis frames inboard of the wheel hubs.



Above: *Side view of model needs quite a close study before it becomes apparent that this is a motorised model and not a static show piece. Though this model is left in standard road trim, the mudguards could be omitted for racing if desired and a number painted on the radiator grille and each side of the bucket seat.* **Below:** *Constructional sketches, not to scale, are keyed to references in text.*

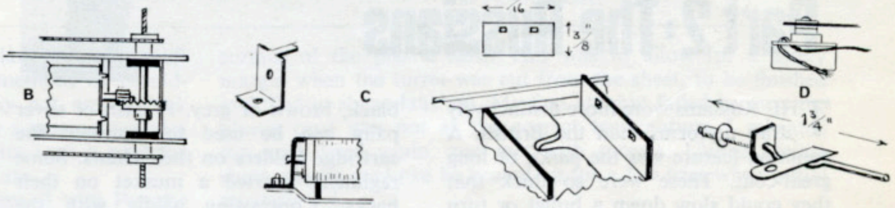
shaft with an 8 BA nut either side of both wheels. These can be adjusted to give the correct track, $1\frac{5}{8}$ inches, then locked.

For the front axle a piece of $\frac{1}{16}$ inch diameter rod is used, bent to a similar shape as the original plastic axle provided in the kit. Plastic card supports are used, as with the back axle. The front axle also carries the guide shoe mount which is a small metal plate soldered to the bottom centre of the axle. A standard MRRC guide shoe is used and should be attached to the mounting plate before the axle assembly is installed. First fit the pick-up braids and solder on short lengths of wire flex to connect up to the motor. The guide shoe spigot, with suitable washers to give the correct sit in the slot, is passed through a $\frac{1}{8}$ inch hole in the plate, a piece of paper is slipped over it, and a small washer is soldered to the spigot; the paper prevents you from accidentally soldering the washer to the mounting plate, and when removed will give the necessary free movement to the shoe. Sketch D shows the front axle assembly in detail.

The plastic card axle supports can now be slipped on to the axle and cemented into position inside the front springs. The leads from the pick-up braids are attached to the motor contacts by small pieces of rubber sleeve. The front wheels are bushed with thin brass tube, this being a sliding fit on the axle and long enough to give the required spacing between wheel and chassis. A small washer soldered to the tube locates the wheel when glued in place. Both wheels are retained on the axle by soldered washers, again using slips of paper to avoid accidentally soldering the wheels rigidly to the axles.

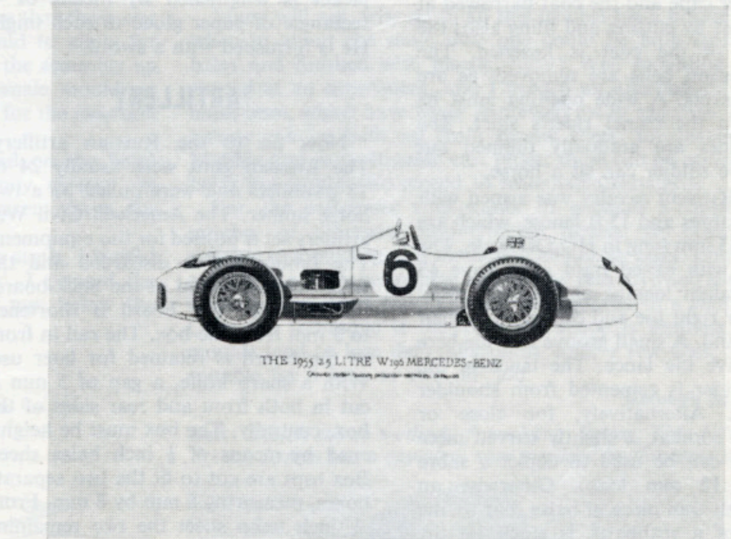
At this stage try the chassis on your track and check for free running. You may need to adjust the pick-up shoe height or the motor location, for instance, to give a smooth drive. Also preliminary testing will show any bad joins in your wiring. Only when completely satisfied with the chassis should you proceed with the body, following stages 12-32 in the kit instruction sheet. The only important thing to remember here is a cut-out in the underside of the petrol tank to clear the contrate gear and axle supports. With these racing old-timers you can quite legitimately leave out the mudguards completely; many will prefer to do this, though I ve left them on my De Dietrich and Mercedes models. The driver, of course, comes from the kit.

This motorisation hardly intrudes on the scale appearance of the model—in fact the rubber tyres enhance it considerably and could well be incorporated to advantage, even on a static version of this model, by detail enthusiasts. To disguise the presence of the motor beneath the chassis I gave the sides a coat of matt black and this renders it less conspicuous than the bare metal.



SPECIAL OFFER FOR READERS

Included with this issue is a loose order form giving details of the first in a new series of top quality full-colour racing car prints available in booklet form and specially suitable for framing. Published by Castrol in conjunction with Knightsbridge Publications, publishers of AIRFIX magazine, this attractive set has been prepared under the direction of noted car historian Cyril Posthumus, Editor of *Motor Racing*.



Titled **A Castrol Series of GRAND PRIX CARS, 1948-67,** the series comprises the 1948 $1\frac{1}{2}$ litre 4CLT Maserati, the 1949 $4\frac{1}{2}$ litre Lago Talbot, the 1955 $2\frac{1}{2}$ litre Mercedes-Benz (reproduced above), the 1957 $2\frac{1}{2}$ litre Vanwall, the 1958 2 litre Cooper-Climax, and the 1967 3 litre H-16 BRM. Models similar to the latter three are included in the Airfix electric motor racing range. All the drawings are to a constant scale.

From May 12, this set of prints will be on sale from reputable book sellers and newsagents at the very modest price of 7s 6d, but prior to publication we are able to offer the set to AIRFIX magazine readers at the special reduced price of 6s, or equivalent to only 1s for each of these fine colour drawings. Frames are being prepared for those who wish to form the series into a colourful wall display and these will also be offered at a special price. **OFFER CLOSES ON MAY 10, 1967.**

CRIMEAN WAR

by C Jones

Part 2: The Russians

THE Russians wore more distinctively drab uniforms than the British. A common feature was the *burka* or long great-coat. These were so thick that they could slow down a bullet or turn any sword other than the sharpest.

I began with the cavalry, these being the easiest. I selected the riders from the Arab set plus the camel rider with raised musket. The billowing Arab cloaks have to be shortened to a mere shoulder cape and the coat narrowed at the waist by cutting and filing also; the spread of the coat is lessened. The ammunition belts are removed, as are the muskets. A wide opening must be made in the camel rider's skirt. The skirt sides are gradually thinned out until the soldier can sit a horse.

The Russian cavalry was armed with heavy sabres and 15 ft lances, which are about 45 mm long in HO/OO scale. The figures with raised right arms have 45 mm straight lengths of wire supported on their right toe and cemented in their right hand. A small groove is made here to receive the lance. The lance of the other rider is cemented from shoulder to toe. Alternatively, for close or quarter combat, a slightly curved piece of wire can be used to depict a sabre (about 15 mm long). Otherwise an extremely thin piece of balsa, cut to the shape of a scabbard, is stuck on the horseman's left thigh.

The most well-known Russian cavalry regiments were the Cossacks. The Terek Cossacks wore red *burkas* piped with gold, the Don Cossacks wore blue piped with red; but most wore the same as the rest of the cavalry, yellowish-grey with gold epaulettes. The cavalry wore the *papakha* or fur hat, which was either black, brown or grey. A dash of silver paint can be used to represent the cartridge holders on their chests. Some regiments carried a musket on their backs. Contrasting wildly with the sombre appearance of the cavalry men were their officers. They wore elegant green frock-coats edged with silver. The mounted US artillery officer suited my purpose. His broad brimmed hat is trimmed down to *papakha* size, and his jacket is lengthened by means of a rectangle of paper glued to each thigh. He is furnished with a sword.

ARTILLERY

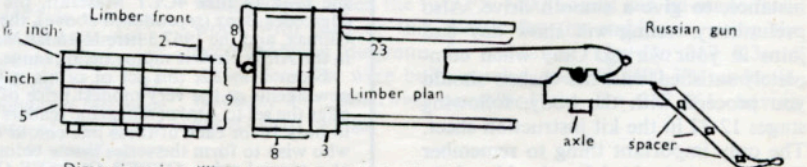
Now on to the Russian artillery. The Russian guns were usually 24 or 18 pounders and were pulled by a two horse limber. The American Civil War artillery set is utilised for this equipment. The limber top is discarded and the yoke pole separated at the buck-board, but retained. The board is shortened to 3 mm from the box. The rail in front of the board is retained for later use. With a sharp knife, a gap of 5 mm is cut in both front and rear sides of the box, centrally. The box must be heightened by means of $\frac{1}{8}$ inch balsa sheet. Box tops are cut to fit the two separate boxes, measuring 6 mm by 8 mm. From $\frac{1}{16}$ inch balsa sheet the two remaining sides are cut. They are approximately 8 mm square, and are cemented to the floor and side ends of the boxes, leaving a gap in the centre of about 2 mm. Then the box tops are cemented on and each box is finally topped by 1/16 inch lids, 8 mm by 7 mm.

When the construction is firm and dry, the balsa is filed down flush with the original limber sides. Two holes are made with a pin on the outside of each lid, 6 mm apart. A piece of wire is then bent to form side rails, and stuck into the holes so as to project 2 mm. Two spacers are cut to fit across the gap between the boxes from the original front rail and cemented there. The cross pieces of the yoke pole are removed and the pole cut in half. The halves are now glued to the underside of the board outside the outermost supporting beams, leaving about 23 mm projecting. The Russians harnessed a horse to the inside of each beam, by a girth and a yoke.

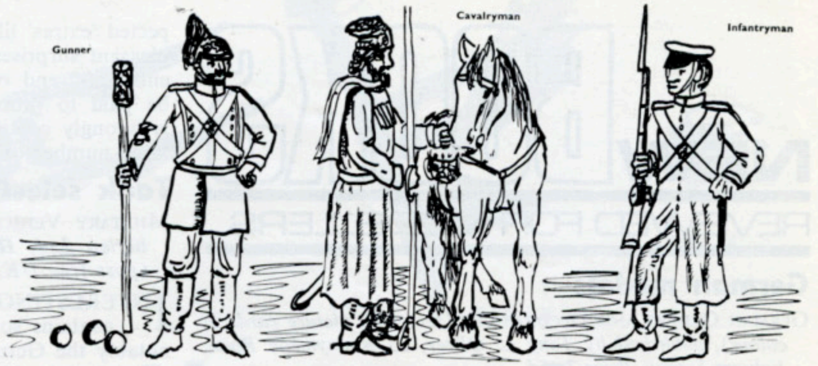
So with the limber completed, we turn to the gun itself. The Russian guns were both heavier and higher than the British ones. First, I cut away the axle, but kept it in one piece. The cavity made is then filed with a balsa strip cut to fit. Then the axle is cemented back on to the gun carriage—thus the carriage has been heightened. The gun trail is cut from the carriage just behind the slot. Fixing the wheels on to the axle the carriage is held at the horizontal and the trail brought up to its rear end. The angle at which the trail will have to droop to touch the ground is carefully noted, and then the trail is cut so that when it is cemented flush with the carriage, it will touch the ground.

The Russian guns had a box trail. The eye which takes the hook is carefully removed, and a 2 mm strip is cut from inside the trail leaving two separate trail sides. From the front rail, three spacers are cut to fit between the trail sides at regular intervals. The trails are cemented together then attached to the carriage with UHU or other strong cement. The barrel is now put in place.

The Russian gun crew was made up of four men plus an officer. The Russian uniform was strikingly like that of the first world war German and can easily be converted from the Airfix figures of that era. The four figures I selected were: the flame-thrower, the grenadier,



Dimensions in millimetres unless marked otherwise the stretcher bearer and any one of the machine gun crew except the man with the ammunition box. It is possible to make two gun crews from one German set. The Russian gunners wore a black, spiked helmet, surmounted by a black horsehair plume, heavily embossed with brass. The tunic had a button-back front, revealing a rich gold lining. I believe the tunic and trousers were also black and the cuffs were of gold lace. There were white cross-straps, holding an ammunition pouch centrally behind, at waist level. The belt was black as were the boots. Most of this can be achieved by re-painting standard figures. The German haversack must be removed and made smaller, then stuck in its new position. A piece of painted cotton-wool represents the plume.

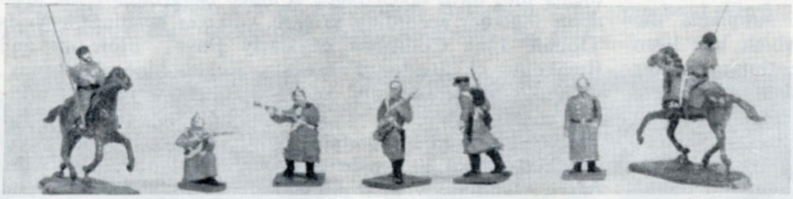


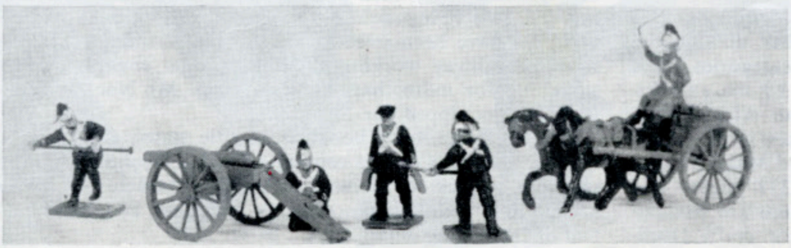
Additional modifications involve removing the grenade, the gas cylinder and the connecting pipe from the flame-thrower. The flame-thrower itself becomes a sponge, and a 20 mm pin driven through the grenadier's right hand and stuck to his left becomes a ramrod. Two small screwed-up pieces of paper represent shell and shot carrying socks and are cemented to the stretcher bearer's hands. Thus the machine-gun crewman becomes the gun layer, the bearer the loader, the grenadier the rammer, and the flame-thrower the cleaner. Figures from the Airfix Arab set provide the outriders and drivers, and an officer is taken from the American artillery, with hat cut down to *papakha* size. This officer is painted as for the cavalry officer already described. Outriders rode on the left hand side horse; and doubtless, when the gun was limbered up, the crew piled on the limber or on the gun trails.

INFANTRY

The next problem that faced me was the Russian infantry. The Russians fought, rain or shine, almost always in their enormous *burkas*. The Russian headgear was either a spiked helmet, or a flattish, peaked cap. Having considered many possibilities, I finally decided on the Arab set and the first world war Germans. The Germans can either be re-modelled as the artillery men were, omitting the plume, for the rare occasions when they discarded their great-coats, or modified on the following lines. The arms, shoulders and head should be removed from the German figure in one piece. The same applies to the running Arab, who also has his feet removed, his *burka* shortened by 1 mm, and a groove cut to represent the front opening of the great-coat. Then the shoulders of the German are cemented on to the body of the Arab. The boots are cut from the German, and the assembled body section stuck on to these. A strong glue like UHU is required to do this. Rough surfaces should be filed down. Of course, by swopping heads and trimming the *burka*, the Arabs can also be used as they are. It is interesting to note that if the running Arab's left arm is bent until the musket muzzle touches the right hand, the effect obtained is that of a soldier re-loading his musket. The *burka* had no belt, but two white cross-straps were worn which held a *kinjal* or bayonet on the left hip and an ammunition pouch on the right. The *burka* itself was yellowish-grey with red epaulettes. The flat cap when worn (depicted by the German stretcher bearer's head with added paper peak) was red with a black peak and band. For officers, use the German ones, who are almost identical to the Russians, even to the medal around the neck.

Below: *Line up of Russian troops from the Crimean War period, all converted from Airfix figures. From left: cavalryman, three typical infantrymen in burkas, marching infantryman in peaked cap, general, and cavalryman.* **Bottom:** *Complete Russian gun crew from 1914 Germans. Note 18 pdr gun with box trail and the limber.* **Top of page:** *Detail sketches for the figure conversions. Details for limber and gun (not to scale) given opposite.*





Numerous other figure conversions suggest themselves for the Russian side, and in particular you should have an ikon bearer as shown in the heading picture. I think the illustration is self-evident. A suitable length of scrap plastic is used as the pole, with a cross-piece added and cotton stays. The banner is simply cut from paper with a brightly coloured religious device painted on it.

Even in 1854 the Russian 'steam roller' was in motion. The infantry always fought in massive phalanxes, the cavalry was never less than three lines deep. The Russian artillery was an extremely efficient arm and could fire faster than the British. But as they didn't believe in losing their guns, they generally pulled out when in danger. The Russians made top-rate soldiers; efficient, obedient in all circumstances and brave when well led, but when they were left on their own they tended to be rather indecisive.

(Continued)

NEW BOOKS

REVIEWED FOR MODELLERS

German medals

GERMAN ORDERS AND DECORATIONS (*set of 50 picture cards in colour*), *published by Tony L. Oliver, 23 Runnymede Road, Egham, Surrey. Price 7s 6d.*

UNTIL we received a review sample of this set of cards, we didn't realise how much we had missed in the way of references on the subject of medals and awards! Everyone has heard of the Iron Cross, but how many could tell, say, a Knights Cross of the Iron Cross from the more mundane Iron Cross Second Class? Or a War Merit Cross from a War Merit Medal? Who could even recognise, let alone describe, the medal awarded for the 1941-42 Winter Campaign in Russia? These and many others covering the 1933-45 period of Germany—including, of course, the numerous war medals—are illustrated and described in this interesting and attractive set of cards.

Printed in full colour, the cards are similar in size and quality to pre-war cigarette cards. The subject matter is taken from the official war-time publication *Die Auszeichnungen des Grossdeutschen Reichs* plus the publisher's very large collection. Each card deals with an individual decoration, illustrating the medal and the ribbon with historical notes and details on the back. In many cases the information includes dimensions, date of institution, and number awarded. Some fascinating facts are revealed, for instance that the Grand Cross of the Iron Cross was awarded once only, to Goering, and that Werner Molders was the first recipient of the Knights Cross with Oak Leaves, Swords, *and* Diamonds, and only 27 such awards were made.

In short, this comprehensive set makes a most useful addition to the reference material available to those interested in World War 2, particularly military modellers. It is available by post from the publisher.

Baby Janes

WARSHIPS OF THE BRITISH AND COMMONWEALTH NAVIES. *By H. T. Lenton. Published by Ian Allan Ltd, Terminal House, Shepperton, Middx. Price 30s.*

THIS new publication from Ian Allan supplants the earlier paperback *British Warships* which has been an essential reference book for warship enthusiasts over the years. The publishers have now adopted an oblong hardback format, rather like a baby edition of 'Janes' to enable them to present more information, bigger pictures, and line drawings of many of the vessels covered.

For convenience the author has placed vessels into what he (and we!) consider logical functional groups (fleet vessels, escort vessels, AW vessels, etc) rather than in the proliferation of somewhat outmoded categories like frigates and destroyers which are still used by the authorities. The title of the book embraces South Africa, even though she is now a republic, and also takes in the small 'new' navies like those of Ghana, Nigeria and Malaysia.

The coverage for a book of this size—272 pages—and modest price is most comprehensive and there are particularly fine sections on tugs and other minor craft. Unexpected 'extras' like machinery and internal layouts come as pleasant surprises. In short, the book is good value for the enthusiast and our only hope is that more attention will be paid to proof reading in the next edition; *Victorious* is wrongly captioned as *Illustrious* at one stage, while the large number of spelling errors becomes irritating at times.

Tank selection

MILITARY VEHICLE PRINTS, SERIES 10. *Published by Merberlen Ltd, Hawthorn Hill, Bracknell, Berks. Price 4s (post free UK, 1s 6d postage overseas).*

INTERESTING latest set of drawings from Merberlen contains some useful items for the military modeller, notably the German A7V tank of World War 1 fame. This massive slab sided vehicle was the German answer to the British tank menace and the 32 ton giant was crewed by 18 men. Because of its simple shape with an all-enveloping body, this vehicle looks a comparatively simple subject for scratch building in card using the 1:76 scale drawing given. Other subjects in this issue are the Lorraine, the Italian M13/40 light tank, the Pz Jager 38 with PAK 36 ('Marder'), plus a scale drawing of the German 13 mm anti-tank rifle of 1918. Pictures of each subject are included along with the usual historical notes and technical details. All the tank drawings are to the standard 1:76 scale,

Triple bill

RED FOR DANGER, *by L. T. C. Rolt. Published by David & Charles (Publishers) Ltd, South Devon House, Railway Station, Newton Abbot, Devon, and distributed by Ward Lock & Co Ltd. Price 42s.*

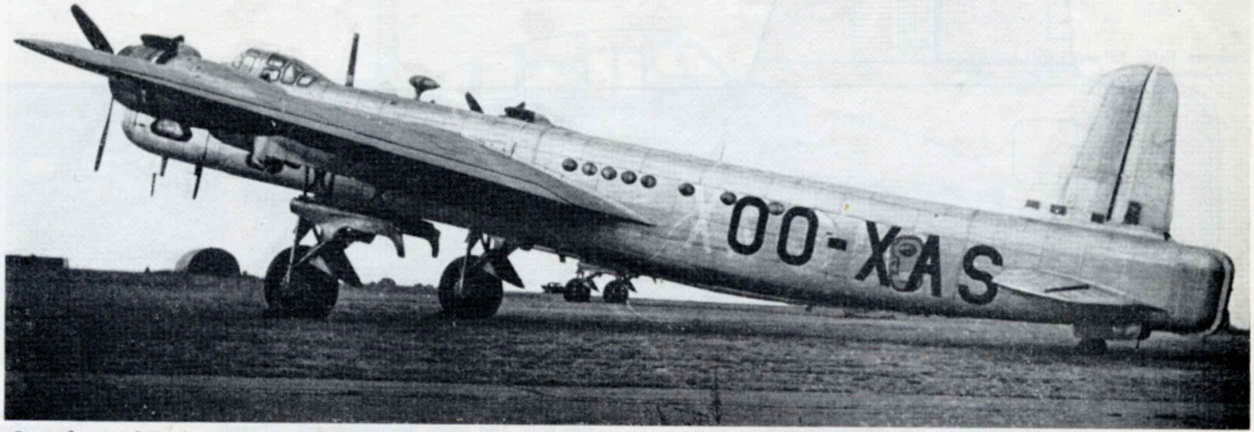
HISTORICAL RAILWAY DISASTERS, *by O. S. Nock. Published by Ian Allan Ltd, Terminal House, Shepperton, Middlesex. Price 42s.*

BRITISH RAILWAY ACCIDENTS OF THE TWENTIETH CENTURY, *by J. A. B. Hamilton. Published by George Allen & Unwin Ltd, Ruskin House, 40 Museum Street, London, WC1. Price 30s.*

A TRILOGY on rail disasters from three different authors and publishers, and though all three differ in several respects, they are all worth reading. *Red For Danger* is an extended edition of the work first published in 1955. Certain errors in the original text have been corrected and additional illustrations and material bring the story forward to 1957. L. T. C. Rolts's accounts consider the lessons to be learned from each accident. Appreciation of the developments that have taken place is aided by grouping the accidents together according to type. Chapter headings such as 'Double Line Collisions of Early Days', 'Blow-ups and Breakdowns', 'Bridge Failures', 'Single Line Collisions', 'High Speed Derailments', and 'Signalmen's Errors' illustrate this point.

O. S. Nock in his preface to *Historic Railway Disasters* sets out to look at accidents more from the technical point of view and study their contribution to the gradual evolution of safety regulations. To make this point some 32 accidents have been selected and fully described. A lifetime study of railway working and professional engagements in signalling for more than 40 years make Mr Nock particularly well equipped for this task.

J. A. B. Hamilton's book, as its title states, is limited to railway accidents of this century and 27 accidents have been selected because of some spectacular character or other special interest. The descriptions are clear and lucid and full of interesting detail.



One of several Stirling transports operated by a Belgian company seen at Blackbushe not long after the war. The old RAF codes 'XK-B' can still be seen on the fuselage sides. (Photo by J. D. R. Rawlings).

STIRLING TRANSPORT

Alan W. Hall converts the Airfix Stirling into the long nose Mark V cargo version

UNLIKE the Lancastrian which was a straight modification from the Lancaster, the Stirling transport never really caught the imagination of the civil operator though at least six squadrons were equipped with the type in RAF Transport Command. Shorts made great efforts to sell the Stirling transport to the civil market as both a freighter and passenger-carrying aircraft but only one firm in Belgium operated them and these were, in fact, surplus RAF aircraft.

As far as modifying the Airfix model is concerned, this is one of the largest that has yet been attempted within these pages. Unfortunately we cannot print a full-size 1:72 scale plan but Richard Ward's drawings give all the necessary details for modifications to be made.

Basically the conversion involves a new nose, tail unit, and the deletion of the top turret. Apart from this there is the problem of letting extra windows into the fuselage sides and blocking up others.

The conversion is not an easy one if the model maker is restricted to the top of the kitchen table for working, and readers who have already made up the basic kit will have discovered that the Stirling is no small model and needs a little more space than usual to build satisfactorily.

Reference material is comparatively scarce. The *Aeroplane Spotter* provided much of the information I required, but apart from this Thetford's *Aircraft of the Royal Air Force* gives a small three view drawing and basic details.

STAGE 1

Apart from cleaning up any surplus 'flash' the first job is to deal with the extra windows needed in the fuselage sides. As can be seen from the plan there are five of these set fairly close together almost over the trailing edge of the wing position. Several methods are available but I chose that which I thought was within the capabilities of most modellers. This was to cut out an oblong from the fuselage covering the area in which the windows were to be set, filling the hole with $\frac{1}{16}$ inch plastic card and then drilling out the holes for the windows.

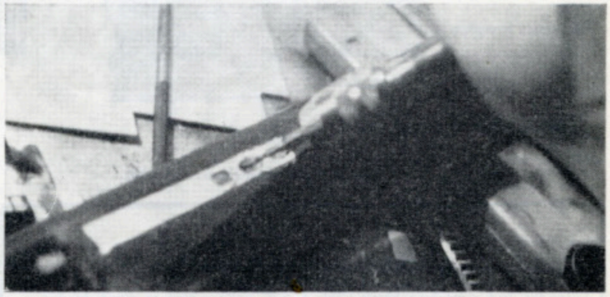
STAGE 2

Once the plastic card has set it can be rubbed down with wet and dry paper to fit the contour of the fuselage sides. Providing a good joint has been made in the first instance there should be no trouble in this though the job is not an easy one. A considerable amount of careful rubbing down is necessary and I found it needed a thin coat of filler run in round the edges to make sure that the joint did not show.

STAGE 3

Next, take a tracing of the window positions and put this on the appropriate place making sure that the area of window to be cut out corresponds to the existing plastic windows in the kit. The holes are then drilled out with a very fine power drill and finished off with a file. By cutting up the existing transparencies, and sticking these in place the job can be completed satisfactorily.

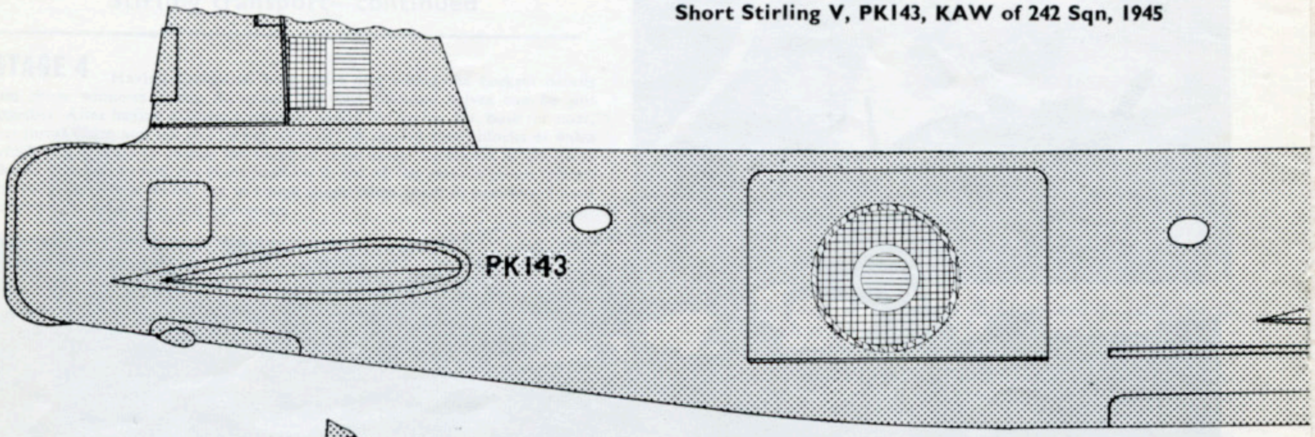
Note: *The alternative to this is to obtain a small piece of thin perspex and let this into the fuselage sides in the same manner. The transparencies and window holes will not be needed and the job can be completed by painting round the areas to be left as windows.*



Above: *Drilling out the window apertures in the fuselage halves with a small power drill. Areas to be cut away are marked on the plastic card insert after it is cemented in place in the oblong slot previously cut in the fuselage. Drill a number of closely spaced holes round the inside of each window area, giving the fuselage half adequate support in the meantime, and join up the holes with a craft knife so removing the area completely.*

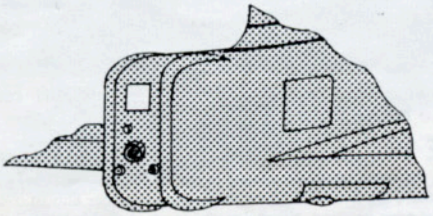
Instructions continued on page 334
Scale drawings on next page

Short Stirling V, PK143, KAW of 242 Sqn, 1945



Note addition of large freight door starboard side only. This opens downwards and outwards. Score on fuselage in model

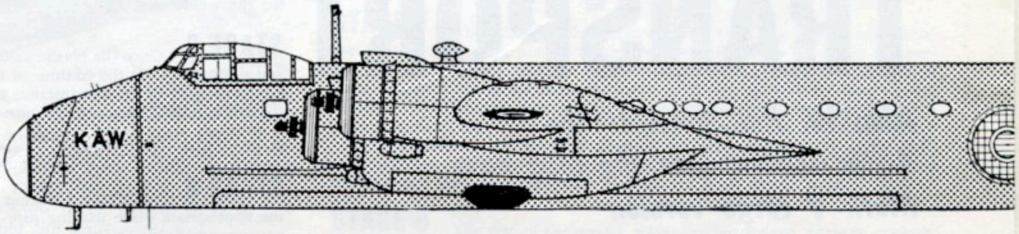
Note additional w
windows common



Sketch of tail (not to scale)

Wings, engines and tailplanes identical to Stirling BIII, though some machines had spinner fairings added

Entry door on port side same as in Airfix kit



Scales 1:72 and 1:144

▒ Matt Silver

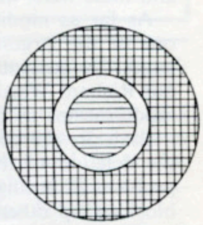
▤ Red

▦ Blue

One inch diameter 'C' type roundels (red, white, blue only) on upper wing surfaces in same position as on bomber

Underwing roundels similar, but $\frac{3}{4}$ inch diameter

Fuselage roundels are C1 type with yellow outer ring



Additional colour notes:

Spinners and airscrews black with 4 inch yellow tips to prop blades.

Collector rings and exhaust manifolds blackish bronze.

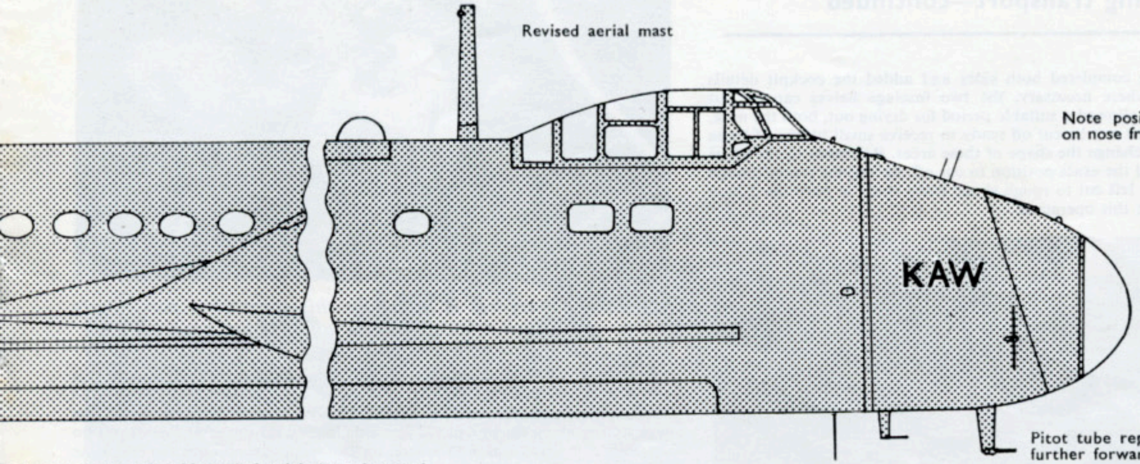
Code 'KAW' and serial PK143 in black.

Undercarriage doors silver, inside and out.

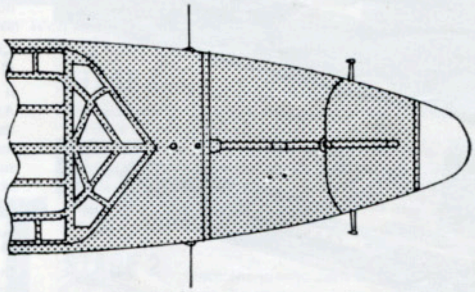
Undercarriage legs and wheel hubs silver.

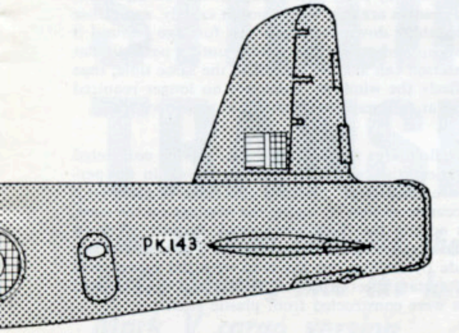
Comparative dimensions:

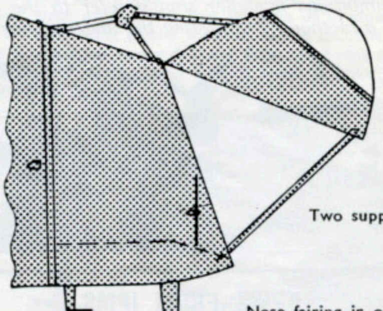
	Stirling BIII	Stirling V
Length	87 feet 3 inches	90 feet 6$\frac{3}{4}$ inches
Span	99 feet 1 inch	99 feet 1 inch
Height	22 feet 9 inches	22 feet 9 inches


Revised aerial mast
Note positions of small aerials on nose from plan and elevation
KAW
Pitot tube repositioned further forward

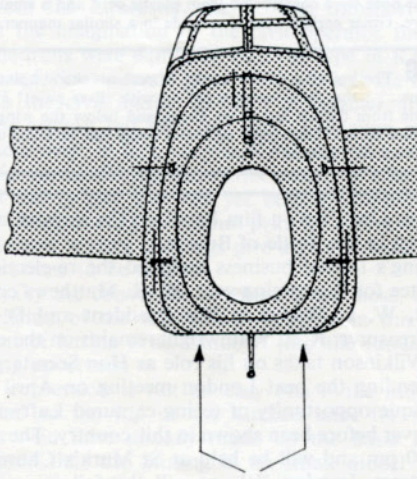
indows to passenger cabin and the deletion of several
to the bomber versions






retractable hoist for raising nose fairing
Cables
Two support stays 'A'
Nose fairing in open position

Wooden floor level shown dotted



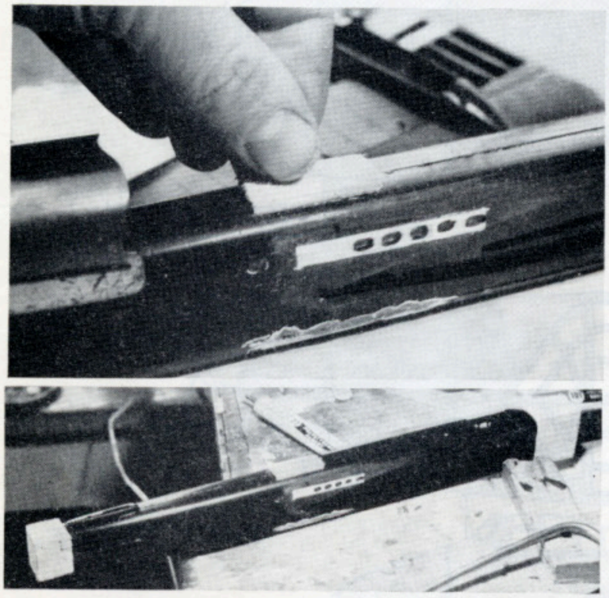
Full details for methods of moulding transparency needed for nose in Stirling V conversion were given in our May, 1966, issue

Drawings by Richard L. Ward

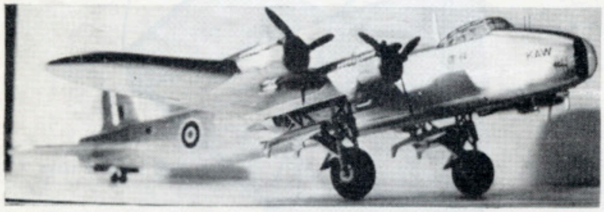
Stirling transport—continued

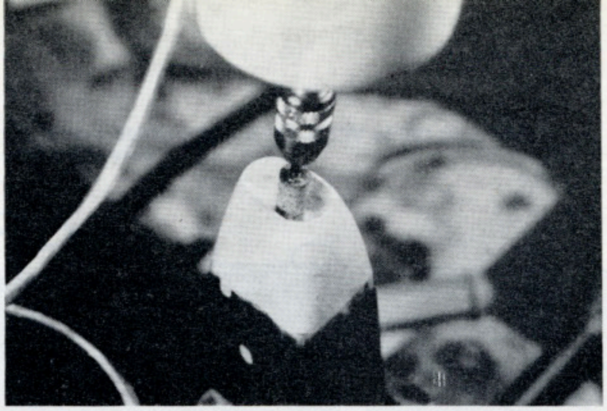
STAGE 4

Having completed both sides and added the cockpit details and other windows where necessary, the two fuselage halves can be put together. After having allowed a suitable period for drying out, both the nose, top turret space and tail can be cut off ready to receive small blocks of balsa which will be used to change the shape of these areas. Reference to the plans should be made to find the exact position to cut off the various pieces though the balsa fillers can be left cut to rough shape when stuck in position. I used polystyrene cement for this operation.



Above: *Adding balsa blocks to the nose and tail ready for reshaping.* **Below:** *A view of the completed model, though underwing roundels were still to be added when this picture was taken. The really ambitious modeller should refer to the next article for a method of retracting the undercarriage!*





Above: *A power drill is useful for this conversion, particularly for such refinements as a hollowed out nose.*

STAGE 5

The nose section was dealt with first. After having shaped this with a chisel and, finally, sandpaper and two coats of filler, I drilled out the fuselage interior using the power drill. Ambitious modellers can cut off the nose section along the line of the upwards folding section after this operation has been completed and with a little further work can produce the operating section. A transparent section was made by keeping the part cut off from the nose and using this as a male former for the moulding process. The operations to make this transparency have been described fully in earlier articles.

STAGE 6

In sanding down and finishing the top turret area I found that it was useful to add a quantity of body putty to the seam of the fuselage joint. As this is a very long one the chances are that it does not fit exactly, and rather than spend an hour or so polishing down the top of the fuselage I found it much easier to build this area up and scrape and sand it until a perfectly flat surface remains. The balsa section can also be shaped at the same time, thus saving two operations. Similarly the windows which are no longer required can be filled with body putty at this stage and rubbed down when dry.

STAGE 7

The tail is the final area needing attention. Having completed the sanding and filling operation, the two ribs which are shown in the perspective sketch on the plan are made from thin card and stuck in place with balsa cement. I found the accurate section by laying the fuselage on the card, drawing round it and then adding the thickness needed. A pair of sharp scissors were all that was needed to complete the operation. The transparency in the extreme tail was made by drilling out the area with the power drill and inserting a small piece of acetate sheet after the interior had been painted black. Other bits and pieces were constructed from plastic stem.

STAGE 8

The rest of the model, wings, undercarriage, engines, cockpit, etc, are now completed according to the kit instructions. The existing mast behind the cockpit was modified by a simple filing operation and the pitot heads under the nose were constructed from plastic card and a small piece of 5 amp fuse wire. Other aerials were also made in a similar manner.

PAINTING

The painting of the model is perhaps the simplest of all the operations . . . that is if you can get on with silver paint! Fuselage roundels came from the kit but those above and below the wings came from HisAirDec sheets. The serials and nose codes can be made up from Letraset or Blick dry transfers.

NEWS FROM IPMS

FAST gaining a reputation as unbeatable, John Chisman was the winner of the Hurricane kit building competition at the IPMS Annual General Meeting on March 31 with a model that had taken 150 hours to build.

Second came Dick Ward's model of *Night Reaper*, Kuttlewascher's famous Hurricane. This had full flap, cockpit and undercarriage detail together with cut-out control surfaces. Dick is, of course, well-known for his drawings in AIRFIX magazine.

Junior member Robert Beasley gained third prize with an imaginative 'Hurricat' conversion—the bow of a CAM-ship, the catapult and its aircraft.

Competition over, the sixty members present, coming from all over England as well as France and Holland, sat back to watch 'Angels One-Five', a film based on the story of a Hurricane squadron in the Battle of Britain.

The evening's formal business included the re-election of a UK committee for the coming year. W. R. Matthews continues as President, W. L. Baxter as Vice-President and D. R. M. Oxford as Treasurer. R. R. Wainwright remains on the committee, but J. Wilkinson takes on his role as Hon Secretary.

Those attending the next London meeting on April 28 will have the unique opportunity of seeing captured Luftwaffe film which has never before been shown in this country. The meeting starts at 7.00 pm and will be held at St Mark's Church Hall, Balderton Street, London W1, as will the following meeting on May 26. Non-members are welcome and can obtain further information about the International Plastic Modellers' Society from the Hon Secretary, 5 St David's Close, Iver Heath, Bucks.—*R.J.H.*

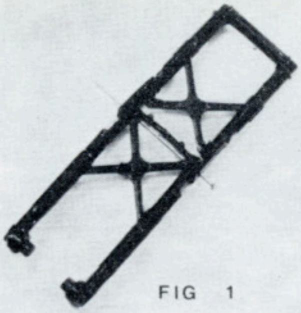


FIG 1

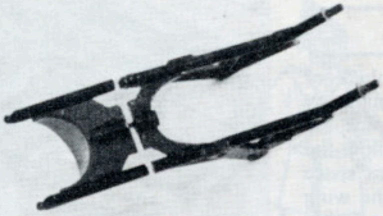


FIG 2

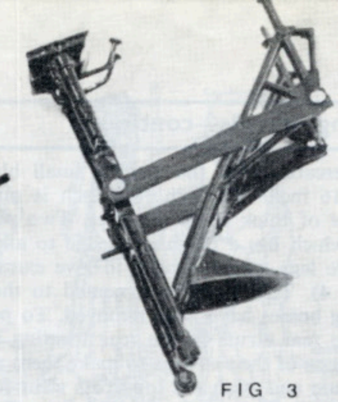


FIG 3

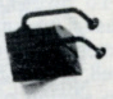


FIG 4

Retracting those wheels

FOR THE MODELLER WHO WANTS EVERYTHING, ROGER BOWYER TACKLES THE COMPLEX STIRLING UNDERCARRIAGE

AS most enthusiasts know, the Stirling undercarriage was a complex system and advanced for its time, making it all the more rewarding to have the undercarriage of the Airfix Stirling model retractable. To carry out this task is not as difficult as it may, at first, appear and I have shown the stages in picture form.

Modifications to kit parts are as follows:

Main U/C Legs (Part 189): These are cut immediately above the cross strut holding the upper supports for the forward undercarriage door. Then file the legs on the outside to half their thickness, 7/32 inch from the cross strut on the lower section, and 1/8 inch from the cross strut on the upper section. Two small plates are then made from scrap plastic measuring 5/16 inch × 1/8 inch × 1/32 inch, and cemented to the recesses on the outside of the upper section of the two legs. When these have set, drill a 1/32 inch hole, 1/16 inch from the bottom of the plate and on the centre line to take a thick dressmaker's pin. Another hole is now drilled 1/16 inch from the top of the main leg, again centrally. Repeat these operations for the other side of the leg assembly.

The two sections are now hinged by two pins cut to ¼ inch and the main pivot rod made from scrap 7/16 inch long and 3/32 inch diameter and cemented between the top ends of the upper u/c section. The main u/c wheel can now be assembled as per kit instruction and fitted (**Fig 1**).

Rear U/C Legs (185): Cut off a section of 11/16 inch from both horizontal parts of the rear undercarriage legs, the part with three holes, using the diagonal strut as a finish line; also cut 11/16 inch off the diagonal strut. A 1/32 inch hole is then drilled at the junction of the four struts to the rear of the leg to pivot on the rear end of the side members. These side members can now be made from scrap measuring 1⅜ inch × ⅛ inch × 1/32 inch, and a hole 1/32 inch made 1/16 inch from each end (**Fig 2**).

Mudguard Assembly (184): This part is cut on the centre line of the protruding pegs, and the pegs removed. The top half is filed to increase and deepen the semicircular profile, so as to accommodate the wheel when retracted. The two mudguard sections are then cemented to the lower strut sections already cut from the main diagonal strut. When dry, these struts are cut through in line with the cut between the mudguard sections. This part of the operation is concluded by attaching small round plastic rods 3/32 inch in diameter, 3/16 inch long on the lower half, and 1/8 inch long on the upper half, both being drilled 1/32 inch and a pin cemented in the lower (3/16 inch) rod. This enables the lower part of the mudguard assembly to be removed for retraction. The upper mudguard section is then cemented between the rear u/c legs (**Fig 2**).

The side members can now be pinned to the main and rear u/c legs, the rear pins being cut off flush with the inside of the leg so as not to come into contact with the wheel when retracted. Use Araldite on the inside to hold the pins, but not near the pin head (**Fig 3**).

Continued on next page

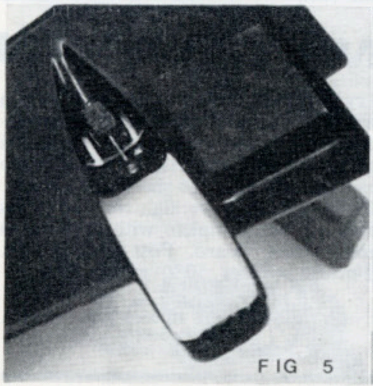


FIG 5

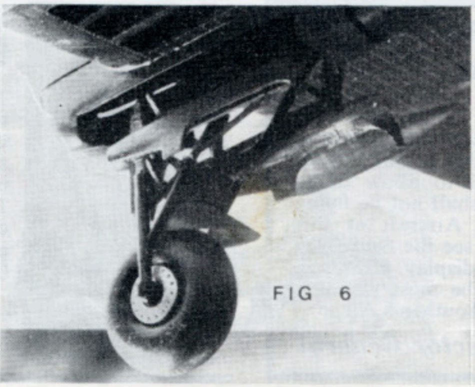


FIG 6

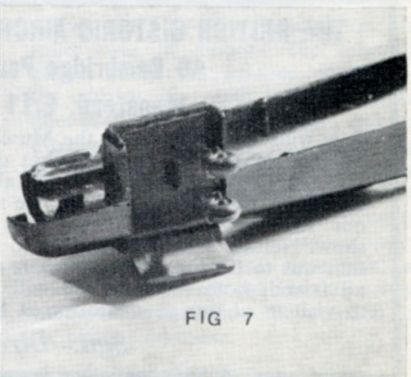


FIG 7

Stirling wheels—continued

To pivot the undercarriage in the wing a small block of plastic measuring 7/16 inch × 3/8 inch × 1/8 inch is made by cementing two pieces of thick scrap together. Two pins are fixed to this block, which has a chamfered edge to allow the top section of the u/c legs to move back to give extra space when retracting (**Fig 4**). This block is cemented to the wing after the two locating bosses have been removed. To position this block, locate the rear struts in the rear locating bosses, first having filed the tops of the rear legs to make them an easy push fit. Set up the u/c and push the top cross strut forward under the pins; you will then see the correct position (**Fig 3**).

Rear U/C Door (195): For this door, make a plastic U-shaped piece with a 1/32 inch hole through which a pin is secured by Araldite. This piece is then cemented to the two tabs on the door, so that it will run in the two slots on the rear nacelle. A rubber block is then cut 5/16 inch × 7/32 inch × 3/16 inch, using rubber from a cycle brake block. It is then fixed with Araldite between the two slots in the wing. With a hole drilled in the rubber block the door will slide forwards to cover the gap when the u/c is retracted, and back when the wheels are lowered (**Fig 5**).

The main u/c doors and the front door can now be attached, the main doors by Sellotape and the front door as per kit instructions. The main door is hinged on the centre line of the side member to enable more of the wheel to be covered when retracted (**Fig 6**).

Tail Wheel Assembly: The tail wheels can quite easily be made to retract by using part 181, cutting off most of the doors and cementing it inside the fuselage at an angle using this to make a box to enclose the tail wheel assembly. Another rubber block is cut to 5/16 inch × 3/16 inch × 3/16 inch with a 3/32 inch hole to take a plastic rod 7/16 inch × 3/32 inch diameter drilled to take the ends of the tail wheel legs. The doors are cut from the closed doors (65) and hinged to the fuselage sides with Sellotape strips (**Fig 7**).

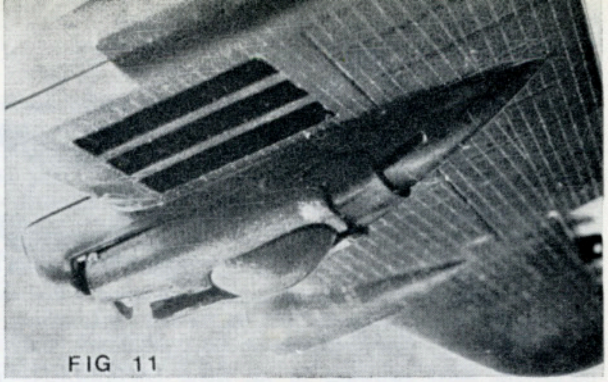


FIG 11

Above: *The undercarriage fully retracted. Picture sequence below shows retracting action. All pictures keyed to references in text.*

To Retract the U/C: (1) Remove rear u/c legs from rear bosses. (2) Remove lower mudguard section (**Fig 8**). (3) With tweezers, pull to the rear the top cross strut on the main u/c legs so that it lies in the space between the pins and the chamfered end of the main pivot block (**Fig 9**). (4) The main legs can now be retracted and the whole assembly pushed forwards to lie in the nacelle (**Fig 10**). (5) The rear door is now pushed forwards to fill the space in the rear of the wheel well in the nacelle; this will also help to keep up the undercarriage (**Fig 11**).

Follow all these instructions with the kit instructions and appropriate parts to hand. You will enjoy the challenge!

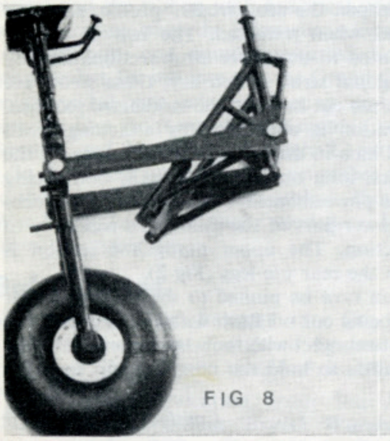


FIG 8

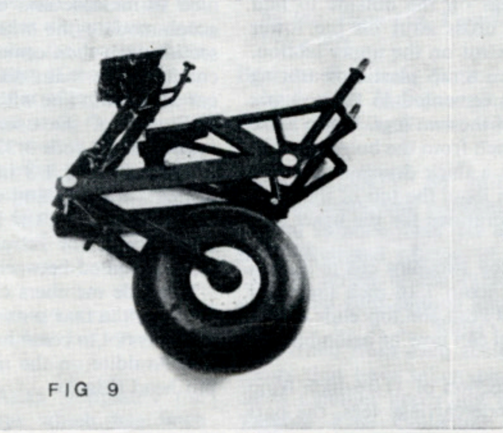


FIG 9

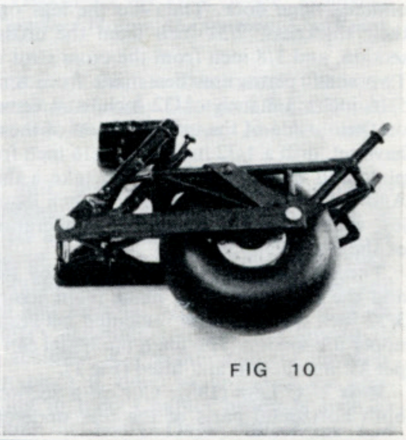


FIG 10

THE BRITISH HISTORIC AIRCRAFT MUSEUM
40 Cambridge Park
Wanstead, E.11

It is with deep regret that the Museum has to inform all its friends and members that due to the Biggin Hill Air Fair Committee's refusal to allow us to exhibit at the coming Air Fair we shall not be flying our Lincoln Bomber or Harvard Aircraft at this show. Neither will they be able to see the Saab J/29 that was to form part of our static display. However, all friends both new and old will be most welcome to visit us at our new location at Southend Airport.

Sgd.—Director General

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Mould your own turrets

USEFUL IDEAS FOR TANK MODELLERS, SCRATCH-BUILDERS, AND OTHERS

Using the techniques suggested here by Kenneth Jones, you'll be on the way to turning out model tanks to this high standard; this King Tiger has a turret moulded from plastic card and utilises wheels, tracks, and other components from Airfix Tiger and Panther kits.

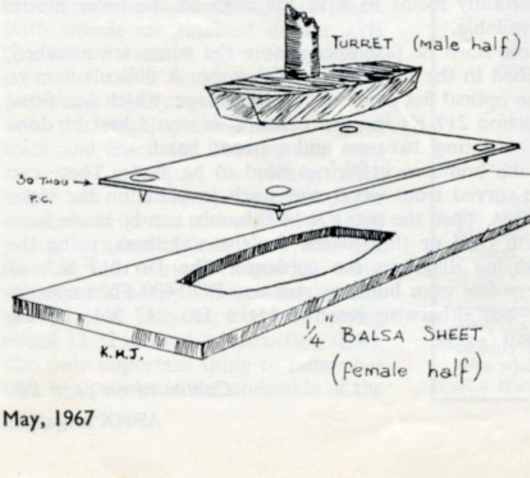
WHILST looking through one of Alan Hall's aircraft conversions in AIRFIX magazine, his methods of moulding cockpit canopies set me thinking, why not mould tank turrets from plastic card? I do not think for a moment my idea is new in the modelling field, but I have not seen it used for any AFV construction or conversions to date.

I was scratch-building a Sd Kfz 182 Tiger II with Porsche turret, from the Bellona drawing, so with the idea alive in my mind I set about the task. The Tiger's turret had been previously carved from close grain balsa, so my male half of the mould was ready. The only extra work involved was to sand approximately $\frac{1}{2}$ mm from the surface dimensions.

I cut the female half of the mould from $\frac{1}{4}$-inch balsa sheet, and pinned a reasonably sized piece of 30 thou plastic card by its four corners on to the balsa sheet. Ensuring that there was sufficient card border around the female mould to allow for stretching, etc, I was ready for the test. I held the assembly up to the light and traced the outline of the female mould on the surface of the plastic card to act as a guide for the insertion of the male half.

The cupola 'bulge' had already been carved on the balsa turret. Rather than remove this, or completely recarve the turret, it was decided to go ahead with the present shape, for better or worse!

Holding the female assembly over a paraffin stove, I waited till the plastic card started to curl or 'ripple'. I pressed the male half through until its base was about 2 mm below the surface of the plastic card. This was to allow for a safety margin when the turret was cut from the sheet, to be finished and filed to shape later on. My first attempt failed because the plastic card was not at the correct temperature. I reheated the card, tried again, and met with success. Unlike acetate sheet, plastic card can be heated up for a few tries when initial attempts fail.



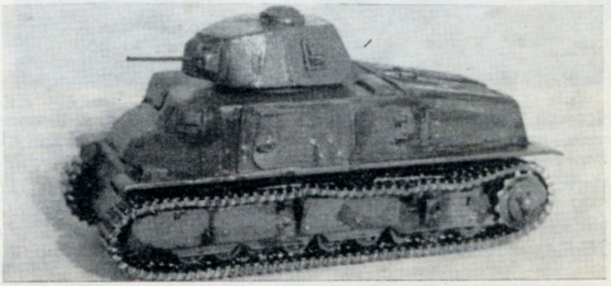
The picture taken by Cam Anderson, a fellow modeller, shows the finished article in place on my Tiger. The other photograph shows a Somua S35 tank built from a scaled down 1:48 *Model Maker* drawing. The hull nose on this tank is moulded by the same method as the Tiger turret and suggests that similar home moulding techniques could be used for many scratch building projects. Aircraft radomes, etc, also spring to mind.

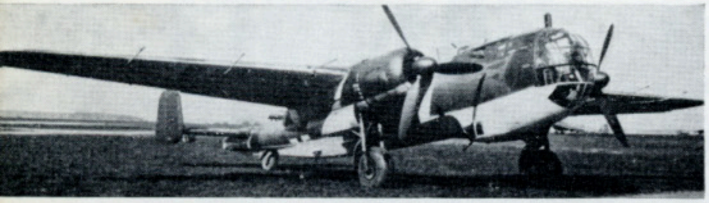
Many will ask, why go to all this trouble for a plastic turret, when in about the same time one could be built from solid balsa and finished with plastic putty? Well moulding turrets started as an experiment, and I needed an alternative to solid balsa ones, which have never impressed me in any case. Not all turrets can be built up from plastic sheet, for instance the Matilda and some Russian cast types; these can be carved from balsa but would also mould to reasonable standards.

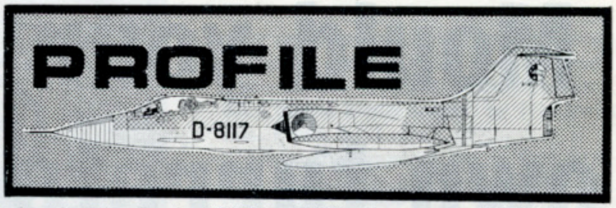
For the wargamer who wants to produce a considerable number of otherwise unobtainable turrets, or other parts suitable to moulding, this method would be an asset. Employing moulds of a more permanent nature (say thin plywood sheet and hardwood) a lot of turrets could be produced in a short time. Once the technique is mastered the scope is limitless. Balsa moulds tend to lose their 'sharpness' after a few tries, but are suitable for a 'one or two off' job.

Kenneth M. Jones

Left: *Sketch shows method of moulding.* **Below:** *This 1:76 scale French Somua has a complete nose moulded by the same method.*







The radio bombing Dornier 217 K2

A CHALLENGING CONVERSION SUBJECT

AFTER converting a Dornier Do 217 E2 into a Do 217 K1, as described in detail in our December issue, a logical progression leads to the building of the long-spanned Do 217 K2. Apart from its bulbous nose—in shape like that of the 217 K1—the next variant had increased wing span to improve its ceiling. It was specially developed to deliver PC 1400 FX radio-guided armour piercing bombs against shipping.

The only modifications needed—other than nose modifications previously detailed—therefore, concern the outer mainplane areas, and the weapon racks situated between the nacelles and fuselage. The K2 bristled with aerials of various types, tedious to model to say the least.

Wing span of the K2 is variously recorded in reference manuals, official and otherwise, as 80 ft, 80 ft 6 inches and 81 ft 4½ inches, and it seems quite possible that during trials the span was slightly altered, although no documentation available suggests this. The variations are however so slight that, in 1 : 72 scale, they amount to changes of 1/12 inch on either wing tip. The standard 217 E and K1 wings spanned 62 ft 5 inches and to make the extended wings I found that it was best to cut off the outer wing panels. I explored ways of utilising the cut away wing tips after removing the balance section. This would have allowed use of the maximum amount of plastic with its fine finish. It required the insertion of a section most easily made of wood and allowed use of the plastic ailerons. My experiments showed it to be a clumsy method, and in any case I encountered problems in correcting the wing washout.

My second line of approach was the removal of the outer wing section with the intention of fitting wooden tips of the required increased span and dispensing completely with the plastic. This again proved difficult, because washout towards the tips represented on the Airfix 217 E at the point where the wings were cut was clearly too great to permit the mere addition of fresh wing tips, or outer sections.

Finally, I decided on the obvious course, and cut off the wing tips at the third main chordwise panel line, as shown on the diagram. I then made new wooden outer wing sections, with plugs at the roots to ensure that they fitted tightly into the plastic wing sections. The line where the join came I then plastered over with Humbrol body putty.

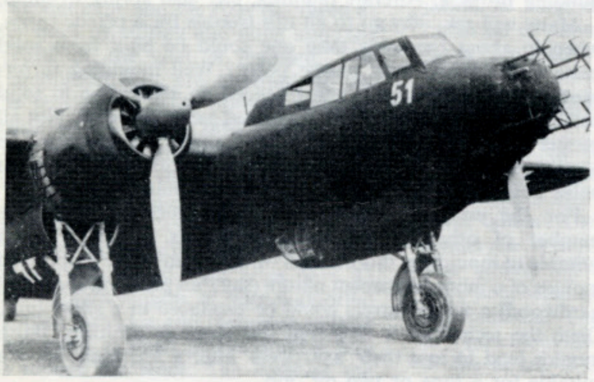
After cutting the wing roughly to shape I attached it to the plastic section with polystyrene cement, then set it aside to set firmly. Next, I plugged the existing gap, where previously part of the aileron had fitted, with balsa. Then, when these two pieces had set, I sanded the new wooden parts to the required shape, taking care to retain the correct dihedral and doing my best to obtain correct washout resemblance.

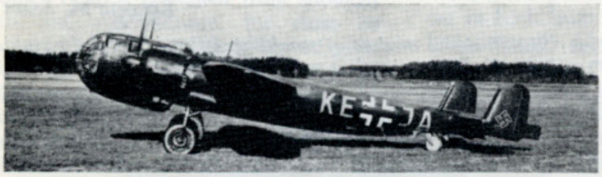
I had hoped to use the kit's ailerons, but it was not really practicable. Although body putty is easy to use, the newly released Humbrol plastic wood runs it close. You can easily plaster this on with your fingers, to which it does not stick, and it certainly seems to have the edge on the older plastic woods available.

The nose must be fashioned before the wings are attached, as described in the December, 1966, issue. A difficult item to add is the optical flat panel of box-like shape, which was fitted to production 217 Ks in most cases. This would best be done using flat sheeting, tweezers and a steady hand.

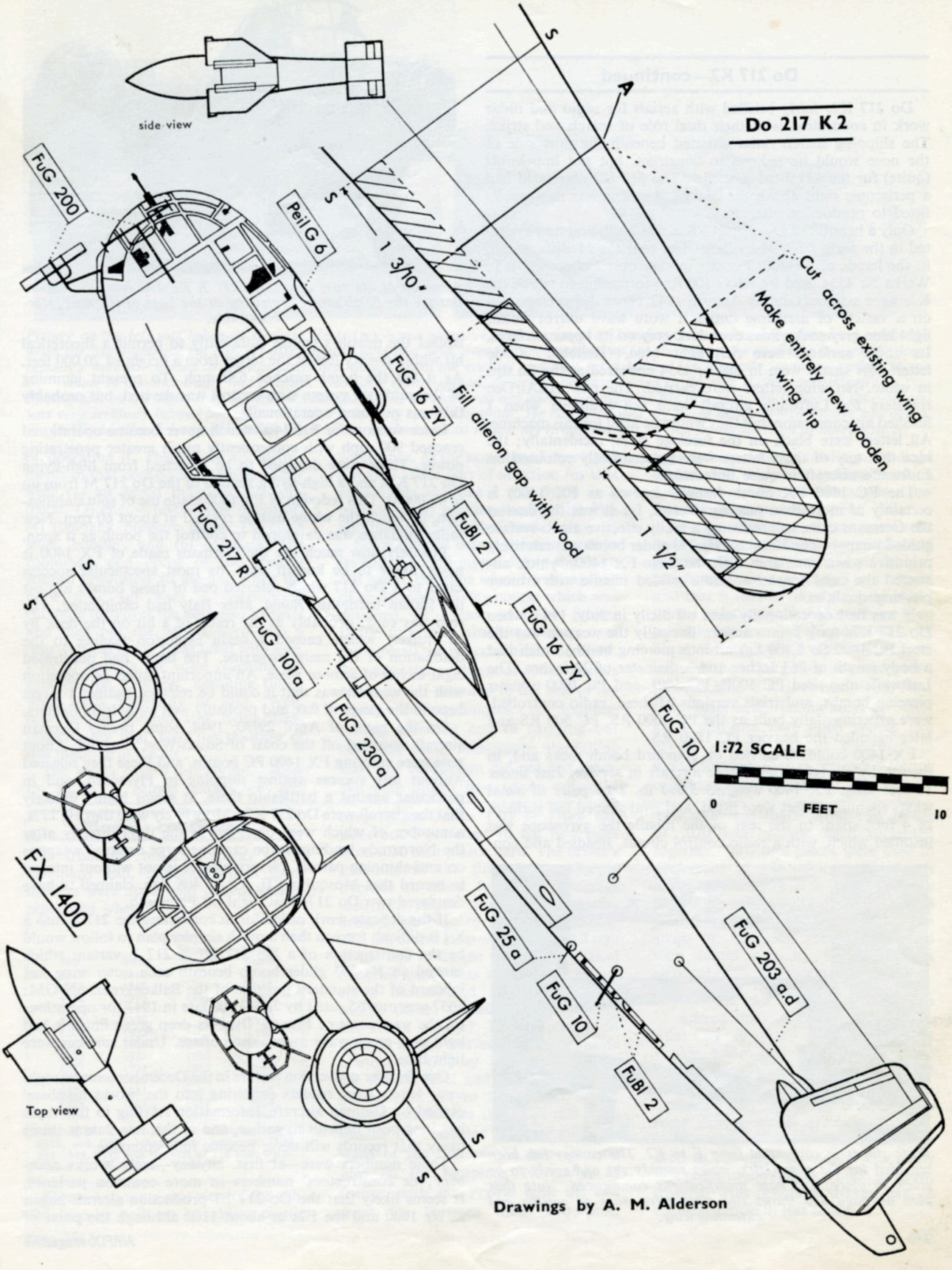
Next, the bomb rack fairings need to be made. These can easily be carved from wood and stuck in place on the inner wing section. Then the two FX 1400 bombs can be made from wood with card or thin plastic for the stabilisers, using the accompanying diagrams for guidance. The Do 217 K3, of which very few were built, carried one PC 1400 FX under its fuselage, but otherwise resembled the Do 217 K1, having short span wings.

Continued on page 340





Heading photo: *Dornier 217 K2 Werke Nr 4572 in two-tone green splinter camouflage and with hellblau undersurfaces. Note the array of wing aerials on this, an experimental aircraft.* **Above:** *Dornier 217 K1. This version first flew on March 31 1942. KE-JA depicted was 217 K 01, and its elongated tail cone contains a braking 'chute.* **Above top:** *The nose of Do 217 J GE-EA, a version of the 217 relatively easy to build as a conversion.*



Drawings by A. M. Alderson

Do 217 K2—continued

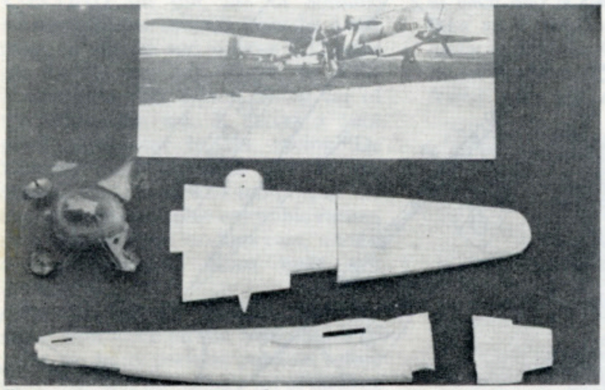
Do 217 K2s fairly bristled with aerials for radio and radar work in connection with their dual rôle of search and strike. The shipping search radar situated beneath the port side of the nose would be tedious to construct, but not impossible (quite) for the advanced modeller. The 217 K2 illustrated had a periscopic sight above the cockpit, but this was not usually fitted to production aircraft.

Only a handful of Dornier 217 K2s was built, and they operated in the main from Marseilles/Istres over the Mediterranean, in the hands of KG100. For my model topic I chose 6N-KT: Werke Nr 4554 used by 3/KG 100 (the formation to which the K2s were assigned) during August, 1943. Since it was employed on a variety of maritime duties it wore wave mirror finish, light blue-grey snaky lines over dark grey on its upper surfaces. Its under surfaces were rich light blue, 'Hellblau'. Code letters (6N small) were in black; 4554 appeared at the fin tips in white. No wing letters were carried. The new HisAirDec transfers for Luftwaffe aircraft were not available when I finished my conversion, but they would be ideal for this machine. All letters were black on the fuselage sides, incidentally; the idea that any of these letters were automatically coloured on Luftwaffe aircraft is quite unfounded.

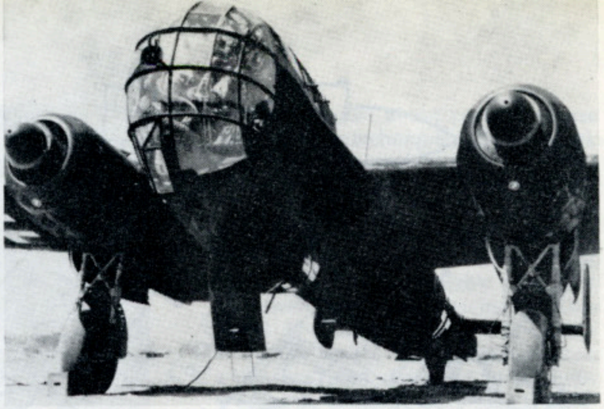
The PC 1400 FX bomb (usually known as FX 1400) is certainly of more than passing interest, for it was the nearest the Germans came to producing a really effective air-to-surface guided weapon. The Henschel Hs 293 glider bomb was relatively primitive when compared with the large FX 1400, which answered the need for an accurate guided missile with armour piercing qualities.

It was first operationally used off Sicily in July, 1943, when Do 217 K2s took it into action. Basically the weapon was the steel PC 1400 (ie 1,400 kg) armour piercing bomb, which had a body length of 76½ inches and a diameter of 22 inches. The Luftwaffe also used PC 500E, PC 500L and PC 1000 armour piercing bombs, and trials versions of these, radio controlled, were experimentally built as the PC 1000 RS, PC 500 RS and later included the heavier PC 1800 RS.

FX 1400 could be carried on standard bomb racks and, in theory, by six types of bomber aircraft in service. Just under 11 feet long, FX 1400 weighed 3,080 lb. Two pairs of metal wings spanning 5 feet were fitted, and oval-shaped tail surfaces of 4 foot span. In the rear of the missile the gyroscope was installed which, with a radio control circuit, steadied and controlled the missile's course sufficiently to permit a theoretical hit within twenty feet of the target from a height of 20,000 feet. As it fell the bomb reached 630 mph. To prevent jamming of the guidance system wire control was devised, but probably this was not used operationally.



Basic stages in conversion from E to K2. The canopy has been moulded for the nose (left), wings roughly cut and ready to be stuck in place, and nose modifications commenced. Note that plan on page 339 shows two alternative ways of cutting and extending wing.



Close up of the nose of the Do 217 K KE-JA. Note the optical flat for the bomb aimer projecting at the base of the nose, starboard side.

Later versions of FX 1400 which never became operational reached 900 mph with consequently much greater penetrating power. These were designed to be launched from high-flying Do 217 K2s and a high-flying version of the Do 217 M from up to 40,000 ft. This redesign of FX 1400 made use of spin stabilisation, in which the whole missile rotated at about 60 rpm. New radio guidance was developed to control the bomb as it spun.

Precisely how much use the Germans made of FX 1400 is never likely to be known now. Its most spectacular success came to a Do 217 which released one of these bombs against the Italian battleship *Roma*, after Italy had capitulated. The ship was sunk, probably as the result of a hit on the deck by 'B' turret, which caused a small explosion leading to the detonation of the main magazine. The bomb had penetrated eight inches of armour plate. An important aspect of operation with the weapon was that it could be released against a target beyond the range of flak and probably well away from fighters.

On the night of April 29/30, 1944, some twenty German aircraft operated off the coast of South-West England. About nine were carrying FX 1400 PC bombs, and these they released without any success against shipping in Plymouth, and in particular against a battleship there. It seems highly unlikely that the aircraft were Do 217 K2s. More likely were they He 177s, a number of which were observed in the days directly after the Normandy landings to be carrying large external weapons on anti-shipping patrols. Nevertheless it is not without interest to record that Mosquito XII, 'O' of 406 Sqn, claimed to have destroyed two Do 217s that night off Plymouth.

If the delicate work called for in converting the 217 E into a K2 is difficult for you then a much simpler plan to follow would be the construction of a Do 217 E5, a 217 E variant which carried an Hs 293 glider bomb beneath each outer wing just inboard of the standard position of the Balkenkreuz. 6N-GM: 5637 was one E5, used by 2/KG 100 late in 1943 for operations off the west coast of France. Over its deep green finish it had light grey-green wave mirror camouflage. Under surfaces were light blue.

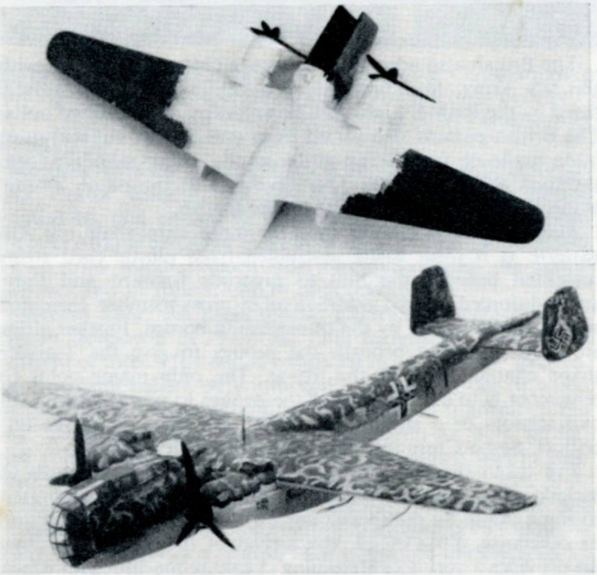
Our Dornier conversion feature in the December issue brought some letters from readers enquiring into the 'works numbers' carried by German aircraft. Information relating to this topic has long been difficult to gather, and at this late date it seems likely that records will never become fully complete.

These numbers were—at first, anyway—truly 'works numbers', or constructors' numbers in more common parlance. It seems likely that the Do 217 E1 production aircraft began at Nr 1000 and the E2s at about 1100 although the point of change-over may not have been in one particular position. This is borne out by the fact that 1161 was an E4, 1164 an E2 and 1176 an E4. The E4 was produced in large numbers and werke nrs in the 1111 to 1230 range are known to have existed. 4211 to 4395 (at least) again were E4s. Incidentally, the prototype Do 217 V-1 first flew on October 4, 1938, and the first Do 217 E on October 4, 1940. The Do 217 J night-fighter based on the 217 E first flew July 31, 1942, and this latter aircraft dove-tailed into the E lines.

On March 31, 1942, the first Do 217 K flew and production K1s followed on the line after the E4s at about 4410, and ran into the early 4500s. Between about 4530 and 4580 came a mixed batch of Do 217 K2s and 3s—the K2s being roughly in the range 4542-4572.

Between about Werke Nr 5300 and 5650 another batch of E4s was numbered—built, perhaps, at a different factory from the earlier machines?

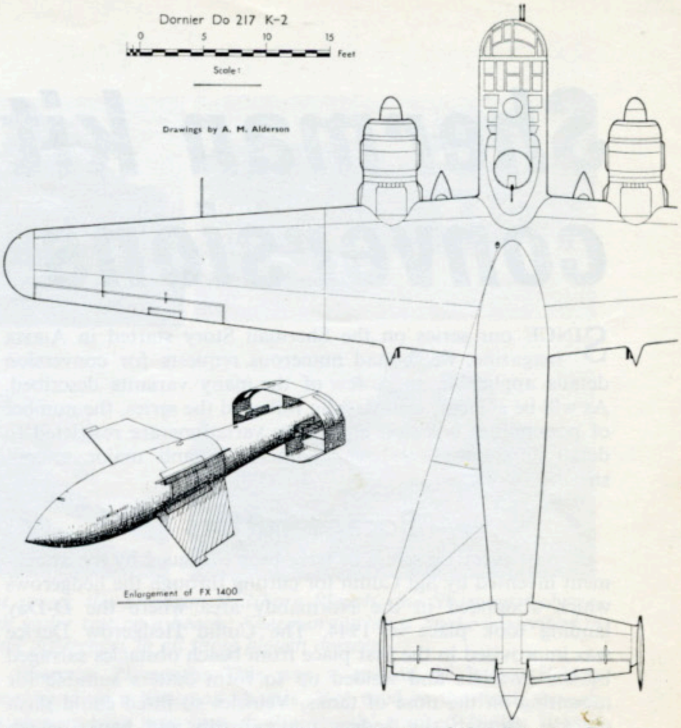
Below: *The model under construction.* **Bottom:** *The completed conversion.*



Although the prototype Do 217 M with DB603 A engines but otherwise resembling the Do 217 K series (and therefore an attractive idea for a conversion) first flew on July 16, 1942, it was 1943 before it came on to the production lines at about Nr 6040 and ran to at least 6260. In 1943 a new numbering system was apparently introduced and led to high numbers, possibly allocated in batches to manufacturers. A batch of Do 217 M1s was numbered from about 40701 to 40730, these numbers probably belonging to the old style of allocation with the 'O' inserted. Another series was numbered from about 56042 to 56170—and here the preceding 5 was almost certainly a prefix to the old number system so that 6042 became later 5.6042. Finally, there were the Do 217 Ms in the 7.22740-7.22850 region, the number system applying to which is clearly different in concept from the earlier one. Obviously there is room for plenty of research into this topic of German markings upon which nothing seems hitherto to have been published, and readers' views would be of interest.

Having conquered the Do 217 K I mean now to do battle with my long-projected Ju 188 conversion from a Ju 88. I've been meaning to tackle this for a long time; it looks jolly awkward!

Michael J. F. Bowyer



Above: *Plan view of Do 217 K2. Side view of the Dornier Do 217 K2 on page 339 shows the variety of radar and radio equipment carried. FuG 10, FuG 16 ZY, FuBl 2, FuG 16 ZY small mast, FuG 25a and the FuBl 2 Lorenz Beam gear was standard radio equipment for the later Dorniers. Special equipment applicable to the Do 217 K2 was FuG 217 R giving early warning, FuG 203 a.d, the aerial for radio control of FX 1400, FuG 230 a fitted to FX 1400 to receive radio signals and FuG 200 shipping search radar The FX 1400 bomb was painted matt light blue.*

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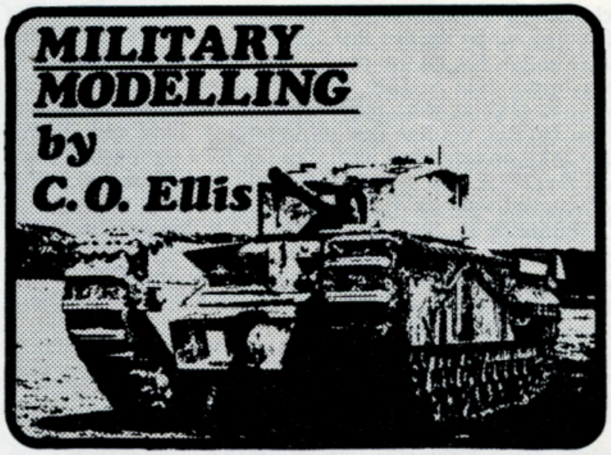
Sherman kit conversions



MILITARY MODELLING

by C.O. Ellis

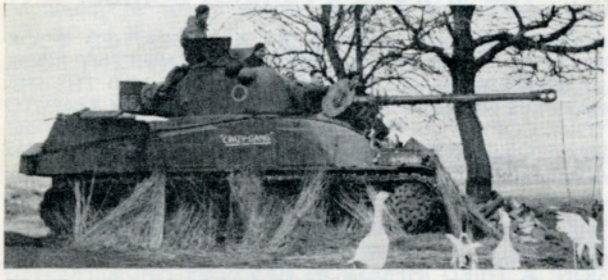
SINCE our series on the Sherman Story started in AIRFIX magazine, we've had numerous requests for conversion details applicable to a few of the many variants described. As will be evident to those who followed the series, the number of possibilities is legion and many variations are restricted to detail differences only, while others demand major re-construction work.

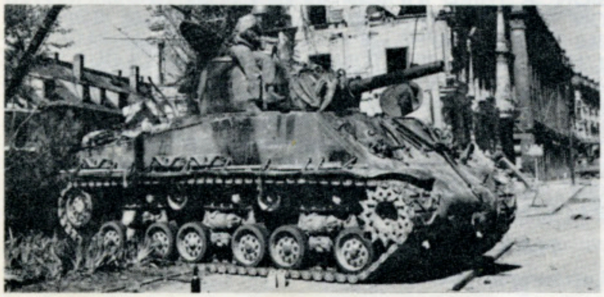
Bocage cutters

Almost everyone seems to have been intrigued by the attachment invented by Sgt Cullin for cutting through the hedgerows which abounded in the Normandy area where the D-Day landing took place in 1944. The Cullin Hedgerow Device was improvised in the first place from beach obstacles salvaged by the invaders and welded up to form cutters suitable for mounting on the nose of tanks. Vehicles so fitted could slash quickly through the hedges undergrowth and banks which tended to restrict armour to the lanes and roads before the adoption of this ingenious idea.

Latterly, of course, any sort of waste or scrap metal was used for making the Cullin Hedgerow Device and, indeed, there was no absolutely 'standard' pattern. However, as used by the US Army the device most often resembled teeth as shown in the sketch. In model form it is ridiculously easy to produce. Simply trace the pattern on to card or plastic card, cut it out, bend at the dotted line and cement it across the nose of your Sherman with a dab of glue on each of the front transmission 'bumps'. As it often got bent or damaged, don't worry if your miniature fitting warps or breaks!

Below: *Sherman Hybrid IC with cast/rolled hull front and armed with 17 pdr. Note rack on hull rear and stowage box behind turret extension.* **Bottom:** *An M4 (105 mm howitzer) with HVSS and 47 degree hull front* (Photos courtesy Imperial War Museum).





The British also adopted this bocage cutter idea and, as with the US Army, introduced it as a field modification usually fitted by the REME Light Aid Detachments of armoured units. The British pattern also varied from unit to unit but was most often made up from scrap girder in the rather rake-like form sketched and illustrated. This gave rise to the name 'Prong' being given to the attachment by the British.

Making it in miniature calls for more care than the US pattern. It is most easily assembled from plastic card strips cemented beneath the hull to protrude forward and these are re-inforced by the addition of a cross-member cemented across the hull front by the transmission bumps. Further strips are then cemented beneath the prongs to give the T-girder shape characteristic of the fitting. The only major point to remember is to cut the ends of the prongs to points either with nail scissors or a sharp craft knife. The dimensions are not critical. Some Cromwells were also fitted with prongs.

I've taken the opportunity on my prong-fitted Sherman to include some further detailing which can be incorporated to some extent on pretty well any other M4 variant, conversion or otherwise. First of all, the arrival of the Airfix half-track kit provides a very nice Browning .5 calibre machine gun which looks very well in the Sherman's rotating turret hatch. You need to drill out the locating hole slightly, but this gun is well worth fitting if you have one left over.

The other essential addition to the model as provided in kit is the inclusion of the rudimentary mudguards at the hull front. I mentioned these a few years ago, but have re-drawn them in this article for newcomers. They are simply cut from paper cemented beneath the hull front above the tracks; Shermans without these were unusual though not unknown.

Remaining details on the model show the addition of *appliqué* armour—just about as much as can be incorporated. This armour consisted of plates welded over the hull in the most vulnerable areas in an attempt to provided added protection against direct hits. Most usual application was at the deepest part of the hull to protect the ammunition racks each side and further aft abreast the side-fitted fuel tanks. Many Shermans are shown so fitted in photographs. *Appliqué* armour could be found, in addition, on the front of the turret, sloped against the driver's and co-driver's hatchways and, sometimes, also across the hull front ahead of the driver's position. Once again, in model form the dimensions for these additions are not critical. Suitably sized rectangles cut from 30 thou plastic card are admirable for depicting *appliqué* armour and can be cemented quickly in place before the model is painted.

One other feature not shown in either of my basic M4 models is the wide M34A1 mantlet. This was adopted—or retrospectively fitted—on late production M4s to give added protection to the gun mounting and co-axial machine gun. If you want to fit it to your model, I've drawn a pattern. It is simply cut from paper, slipped over the gun barrel, and cemented over the existing mantlet. The only further additions are little flanges which flank the gun barrel on each side. These can be cut from paper and cemented in place, as sketched.

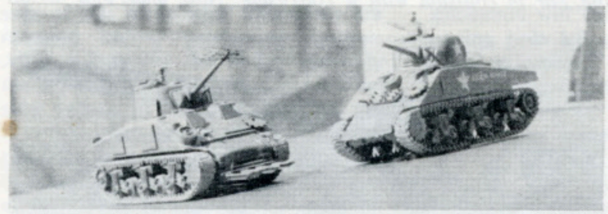
As a final observation on the subject of the basic M4, it is worth pointing out that the original Airfix Sherman model represented a late production M4 with cast one-piece nose; the current moulding, however, has been altered to give a early-production M4 with three-piece bolted nose. If you want to alter this to a later production vehicle, simply cut and file away the two rows of bolts before assembly.

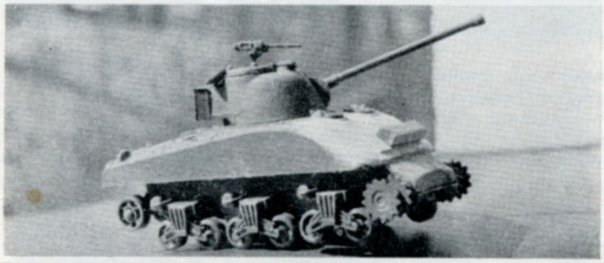
The Firefly

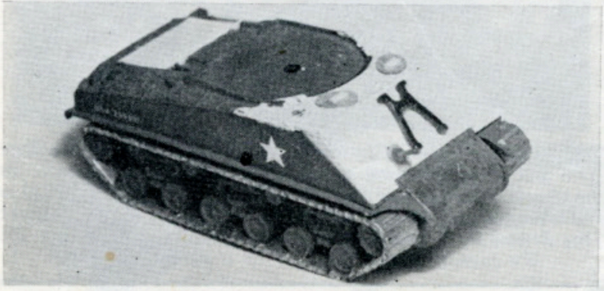
MORE readers have requested conversion details for the Firefly than any other variant and, though we've covered it before, here it is again with some additional ideas.

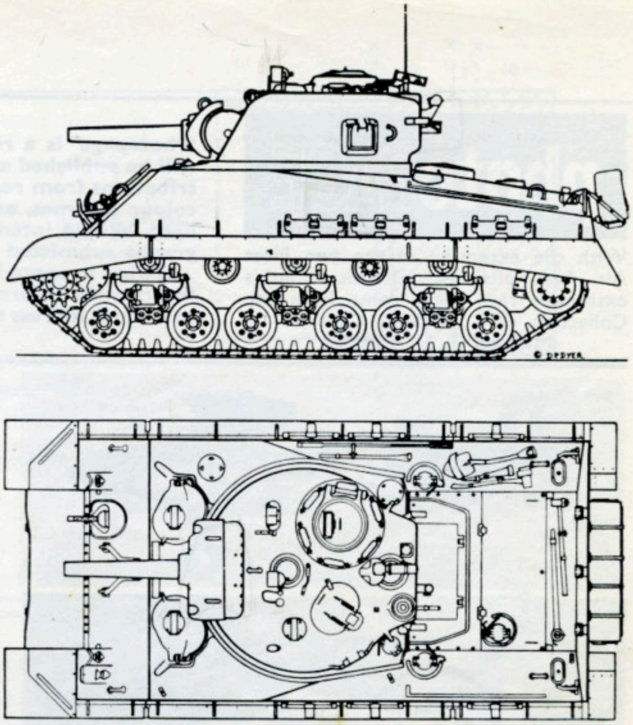
Strictly speaking, the Firefly name was applied to the Sherman Mk V when armed with the 17 pdr gun but as this mark of Sherman (the M4A4) had a longer hull than other M4 variants such a conversion would entail quite a lot of work at the rear end. Fortunately, other Shermans, including the M4 (British Mk I), were also fitted with the 17 pdr and if the modeller chooses one of these the conversion work is made much easier.

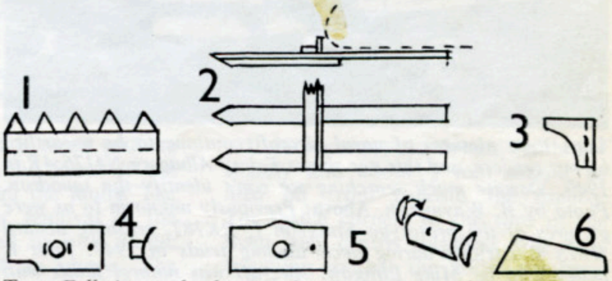
Major work involves the turret which needs an extension box, measuring 7 mm × 12 mm wide × 6 mm deep made up from plastic card and cemented at the rear. Then on the turret roof you need an extra hatch on the loader's side measuring 7 mm square in model form with the corners rounded off with scissors.











Top: *Full-size scale drawing by D. P. Dyer of M4 (105 mm howitzer) with HVSS. Reproduced by courtesy of Merberlen Ltd.* **Above:** *Parts for the conversions described: 1—Cullin Hedgerow Device, 2—'Prongs' (four required) and fitting detail, 3—Mudguards (cement at dotted line), 4—M34A1 mantlet shield and flanges, 5—Firefly mantlet, 6—Optional stowage rack mounted on a few Shermans. All full-size.* **Left, top to bottom:** *Sherman Prong (left) and M4 with Cullin Device. Note* applique *armour. Sherman Hybrid IC under construction. M4 (105 mm) with HVSS under construction showing new hull front and hatches. Rear hull modification shown will be covered next month.*

The 75 mm gun supplied in the Airfix kit is discarded and the mantlet is covered over with thin card to give it a cylindrical appearance as sketched. Finally you need a new gun barrel to represent the 17 pdr weapon. This must be 45 mm long and the Panther gun cut to length and with the muzzle brake filed to a more rounded shape is ideal for this if you have one to spare. Alternatively, use a suitable length of 2 mm diameter plastic rod. A quick and effective way of making a muzzle brake in this case is to cut a long strip of Sellotape in the shape of a right-angled triangle with a 3 mm long base. Wrap this round and round the end of the barrel so that it gives a tapered cone effect to the end. When painted the ridges are filled in and results in quite a reasonable muzzle brake.

The only vital hull modification is the deletion of the front machine gun. The aperture is covered by a 4 mm square of plastic card. Most Fireflies, however, had a stowage box across

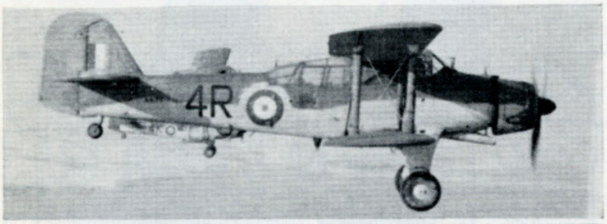
Continued on page 350

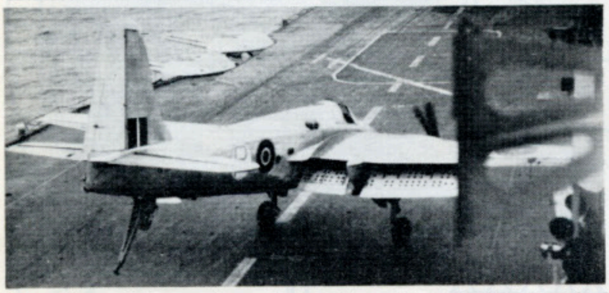
photoPAGE

With the exception of the two Fleet Air Arm pictures, all this month's extremely rare shots come from the Collection of S. Buckley. Captions by **Michael J. F. Bowyer.**

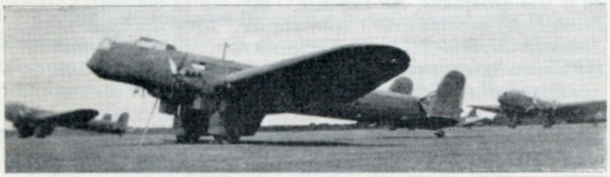
'Photopage' is a regular Airfix magazine feature, and further pictures will be published as available. We would be pleased to consider any contributions from readers, particularly of squadron aircraft or interesting colour schemes, and a free Airfix kit will be awarded for each picture used. Would intending contributors please note, however, that photographs submitted should be private copyright.

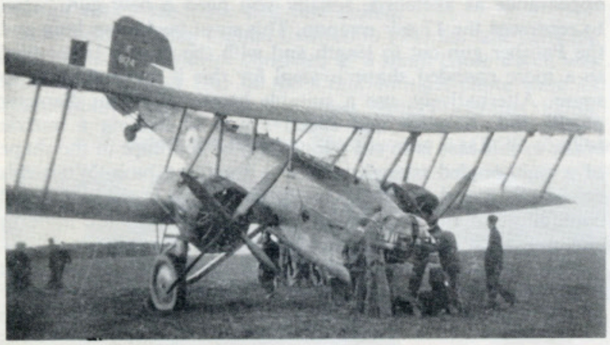
Owing to space limitations, it may be necessary to hold pictures for a few months before publication. To ensure safe return, please write your name and address on the back of each print. We cannot use press cuttings.

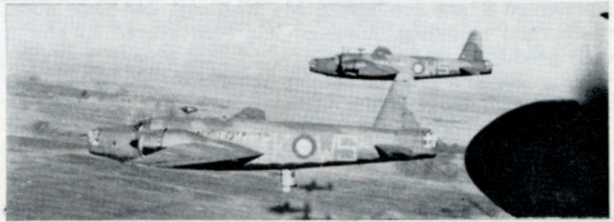


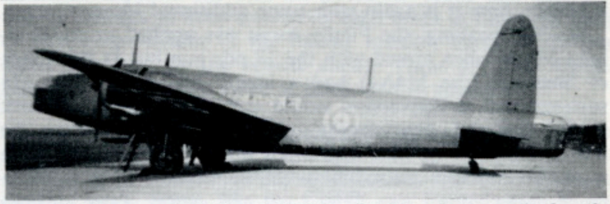


Top: *Rare pictures of naval aircraft continue to be unearthed by our readers, and this one shows Fairey Albacore N4176:4R in 1940. Despite much searching we can't identify the squadron. Photo by B. Waymouth.* **Above:** *Previously unknown to us were pictures of the prototype Sturgeon I, RK787, crashing aboard HMS* Illustrious *during deck landing trials in 1947. Pilot is believed to be Mike Lithgow. Aircraft was natural finish with yellow P in white disc. Picture by W. L. Clay.* **Below:** *It is safe to assume that these Fairey Hendons are of 38 Sqn—unless anyone can prove them to be from 115! Nearest machine is coded F, possibly in red, just aft of the wing.* **Bottom:** *Probably our rarest picture yet is this camouflaged Overstrand, K8174, of No 2 AOS. Early in 1940 this machine went into store at 13 MU.*

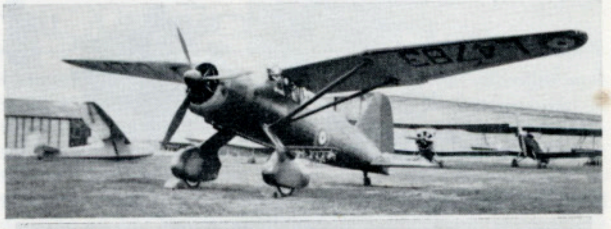


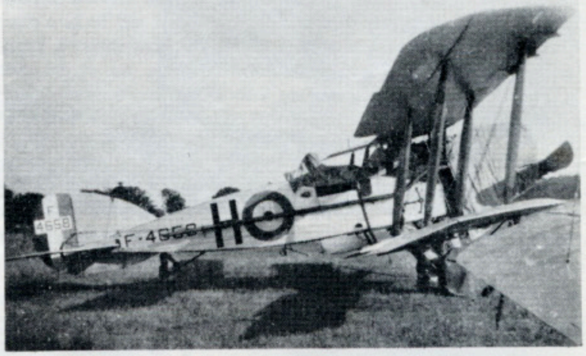






Top: *Wellingtons WS-K and WS-Z of 9 Sqn photographed early in 1940. Both are Mk 1A but unfortunately the serials have been obliterated from the negative. Can anyone supply them? This picture complements another which appears in Beaumont's official history of 9 Sqn.* **Above:** *L4240, a Wellington 1, was used by 38 Sqn initially and was seriously damaged a few weeks before the war in collision with a Hurricane. Note underwing serial.*





Top: *Delightful view of Lysander L4783 in the early camouflage style and with underwing serials. Note also the bomb racks on the wheels, Machine was from 26 Sqn and crashed in May, 1939, a few weeks after delivery, at an Empire Air Day show.* **Above:** *This Bristol F2B, F4658:H was photographed in India in 1929. We cannot identify its unit, but it may be 20 Sqn.*

NEW KITS AND MODELS

CHOPPER FROM RUSSIA

THE Russian Mil Mi-1O 'Flying Crane' is the world's largest helicopter and has recently been in the news in Britain when an example visited this country on a sales tour. Its usual demonstration feat is to carry a coach on its platform.

It is interesting, therefore, to be able to review a Russian-made plastic kit of this machine even if—as is usual with kits from that country — the standard does not reach that we now expect from British manufacturers. To approximately 1:120 scale the model appears to be fairly accurate in outline, though the moulding is a little rough, particularly round the nose. There are no window openings, cabin windows being represented by circular depressions, and the treatment of the flight deck window area is crude.

On the prototype, the undercarriage is a rather complicated affair which has been quite well copied in model form. It would be difficult to assemble without help from photographs of the actual machine, however, as the drawings on the instruction sheet are not very clear. Though this kit has its shortcomings, it *is* the only one of its kind available and with some extra work on the modeller's part it makes a reasonable addition to a 'commercial' collection.

Needless to say this kit is not on sale in Britain or elsewhere this side of the 'Iron Curtain' but modellers with penfriends in East Europe could, no doubt, obtain it on an exchange basis *G.J.T.*

FLATTING AGENT

IN our 'More from your Modelling' feature published in January, we mentioned that the best method of matting gloss colours known to us was the old Humbrol Flatting Agent, which was at that time no longer available. Shortly afterwards we heard from Humbrol that they were to reintroduce this useful product in improved form and we are happy to say that this is now released. The tube and quantity therein is now very much bigger, but essentially it is unaltered from the old days. To use it you simply squeeze a prescribed quantity (instructions are given in the tube) into your gloss enamel, mix it thoroughly, and then apply the paint in the normal way. As if by magic it then dries perfectly matt provided you didn't apply too much flatting agent in the first place. With a little experimentation, however, it is possible to get varying degrees of 'flatness' or, indeed, a semi-matt finish, by varying the quantity of agent which you mix into your paint. It works with any make of gloss plastic enamel. Price of this invaluable modelling aid is 2s, and tubes should now be obtainable from model stockists.

Humbrol have also announced several more additions to their big range of paints and finishes. Of special interest to modellers is a Britfix 20 plastic repair kit which is made, in the first place, for repairing PVC fabrics such as plastic raincoats. It will also bond PVC to polythene and as an increasing number of polythene based models are coming on the market — for example the Airfix Attack Force series — there are some obvious uses of Britfix 20 for model makers. Each tube comes with an applicator and six plastic patches for 1s 9d.

For cementing expanded polystyrene — ie, ceiling tiles— to wood, plaster, or painted surfaces, Humbrol have now released Britfix 10 Expanded Polystyrene Cement. This costs 2s per tube and will also be useful to modellers, particularly as expanded polystyrene tiles are being increasingly used for scenic work.

Apart from the Humbrol 101 Customising Plastic Body Putty which we have mentioned before, Humbrol are now also making 102 Plastic Wood in tins at 2s 3d and in tubes at 1s 3d. We tried a sample of this and found it to be excellent, in particular very easy to 'work' with the fingers without crumbling. Obviously the uses to modellers are legion. Finally, Humbrol have produced a '3-Coat-In-One-Day' paint system which includes ¼ pint tins of their enamel in a selection of colours, Wood, Metal, Hardboard and Plaster Primer, and twelve shades of undercoat. The ¼ pint tins of all these items cost 3s 6d each. Though of limited appeal to modellers, this system of handy sized tins gives a very useful quantity of paint for household purposes. *C.O.E.*

LATEST TANKS

NO less than five new tank kits have reached us from Japan by way of BMW Models of Wimbledon who are marketing these kits under their new Red Label trademark as mentioned last month.

First in the field is a very nice model of the new British Abbot self-propelled 105 mm howitzer which is produced by LS to 1:35 scale for 24s 6d. It is interesting—and gratifying—to see that LS have adopted Tamiya's scale for this, their first venture into tank models. Inevitably we compared this with Tamiya's offerings and can say that the LS model equals their best. It comes complete with motor, crewmen, clear illustrated instructions, and transfers and is well-moulded and accurate. With care you can make a showpiece out of this kit.

Tamiya's latest is a beautifully detailed 1:35 scale M8 Armoured Car which must rate as one of their nicest yet. This

Continued on next page

We reviewed Revell's F-111 in detail in our October, 1966, issue when it was then only available in USA. It is now released in Britain at a price of 12s 8d. To 1:72 scale the model has alternative parts for either the USAF or USN versions. Latter is illustrated here.

New kits—continued

has a very powerful separate chassis to take the motor and batteries and rubber bands are provided to give what is virtually drive on all four wheels at the back. The front axle has correct pattern stub axle steering and spring suspension while the separate tyres are of what appears to be real rubber. The very accurate body is made up separately and snap fits to the chassis. Transfers are provided for the Japanese Self-Defence Force and, as usual with Tamiya kits, you get everything you need except the batteries. Price is 15s 11d.

In the cheaper 1:55 scale range, Tamiya have three new releases. Of these the Crusader tank stands out as the best, though it is not an entirely accurate model. It will, however, be extremely popular with British modellers and lends itself to added detail even if its dimensions are a little out. This is a very easy and enjoyable kit to make. The gear train comes ready assembled, the motor is simply wired, and the road wheels fit straight on to axles moulded integrally with the chassis pan. Young modellers should find it no problem provided that they stick to the illustrated instruction sheet. Much the same remarks apply to Tamiya's other 1:55 scale releases—an M24 Chaffee and an M42 flak tank (which Tamiya call a 'Hunter Tank'). These two share similar simple chassis and motor units. Price of all these 1:55 scale items is 9s 11d. *C.O.E.*

EMILY BY HASEGAWA

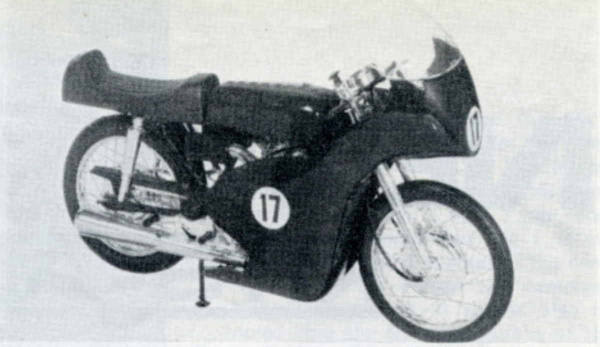
BMW Models of Wimbledon now have stocks of the 1:72 scale Emily patrol flying boat released recently in Japan by Hasegawa, and this retails in Britain for 49s 11d. Though we have received a sample, there was not time to assemble it for this issue, but a detailed review will appear next month. Suffice to say for the present that this giant model is even bigger than the Airfix Sunderland, is packed with detail, and includes one or two 'extras' in the form of a towing tractor, ground crewman, and beaching wheels. *C.O.E.*

MORE MINITANKS

YET more additions have been made to the rapidly growing range of 1:86 scale Roco Minitanks imported to Britain by Model Hobby Products Ltd. Our latest review batch includes a fine replica of the new Federal German Army Leopard tank, selling at 2s 6d, an excellent—and most welcome—model of the German 10.5 cm field howitzer, priced at 2s 6d, complete with towing limber and optional barrel for conversion to the 10 cm model, a range of Dodge trucks of the US Army, and most ambitious of all, a complex model of the Federal German Alligator motorised amphibious assault bridge.

This latter is quite an astonishing piece of plastic moulding which reproduces all the revolutionary features of the prototype, including the collapsible folding crane, the folding deck sections, and the removable bridge decks which can be used in conjunction with other Alligator models to form a long 'pontoon' type bridge of any desired length (assuming that you have enough Alligators!). Alone, of course, the single Alligator can be used as a motorised pontoon ferry. Price for this ubiquitous military model is 5s 6d. The Dodge trucks are all one-tonners based on the same 4×4 chassis and comprise a radio truck, an ambulance, and an open-topped 'Commando' truck. This comes with a removable moulded tilt and an optional folded one. Each Dodge model costs 2s 6d. *C.O.E.*

Below: *New Minitanks models include (from left) the Leopard tank, Alligator bridge, and German 10.5 cm gun.*



Latest addition to the Revell range is yet another super-detail motor cycle kit, this time a Honda Super Sports racing machine. Though this model has similar engine, frame, and wheels to the standard Honda roadster, which Revell released last year, the other components are completely different, and include the streamlined cowl, windshield, large fuel tank and racing seat and fittings. Tyres are of real rubber and have authentic tread. Scale of this impressive model is 1:8 and the kit costs 32s 11d.

NEW PAINT RANGE

OF big interest to aircraft and military modellers is a new range of paint called Modelcolor which BMW Models of Wimbledon is now importing from France. The range of colours available is extensive and comes in five series, namely 'French Air Force', 'Luftwaffe', 'USAF', 'Japanese', and 'Standard'. The last named consists of various universal colours—red, black, yellow, etc—but the others contain colours mixed exactly to the specifications used by the various combatant air forces of World War 2. Thus you can get the USAAF Olive Drab and Neutral Grey, Japanese AF Jungle Green, French AF Khaki, Brown, and Dark Green, German 'Dunkelgrun' and 'Hellblau' and many others—even US Chromate Green used for wheel wells and interiors.

The colours come in jars a little larger than a Humbrol tin and the cost of each jar is 2s 6d. Though this is much higher than any British equivalent, many will accept this for the convenience of having ready-mixed colours to hand. For test purposes we had the French Khaki and Japanese Dark Green and found them to be admirable also for tanks and soldiers. A list of all the colours available is given on the opposite page. *C.O.E.*

NEW CORGIS

IT has become virtually a tradition in recent years for Corgi to bring out replicas of the Monte Carlo Rally-winning car soon after the event. This year is no exception, and we've received a pleasing sample of Altonnen's Mini-Cooper complete with authentic Rally plates, number plate, fog-lamps, mud-flaps, roof rack, spare wheels, and detailed interior. Car collectors will find this well worth snapping up for the modest price of 5s 11d. One of the most unusual models we've yet seen in the miniature field is the 'Kennel Club of America' van based on a Chevrolet chassis which forms the other Corgi release. Presumably it's based on a real vehicle, but even if it isn't *is* very amusing and comes complete with dogs for 7s 6d. Also new from Corgi is a 'World of Wooster' Bentley. *C.O.E.*

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Letters to the Editor

Letters to the Editor can only be answered in the magazine. Readers whose letters are published each receive a free Airfix plastic construction kit of their choice. We are always pleased to receive your comments and pictures, which will be considered for publication. Submitted material and pictures can only be returned if accompanied by a stamped addressed envelope, and the Editor cannot accept responsibility for safe keeping of any such contributions, neither does he necessarily agree with comments expressed by correspondents in the letters columns.

Skybirds saga

I WAS greatly interested in the Skybirds saga.

It is indeed comforting to know that many Airfix magazine readers and modellers are of the 'twenties and 'thirties era (By the way, I wonder who is your oldest reader?)

This association with the earlier years of model making has many facets, and the one that pleases me most is the fact that the older modeller still has in safe keeping, not only the original models, which are a delight to see and read about, but also the related books and magazines, too.

Personally, I have been a Hornby, gauge 'O' enthusiast since the early 'thirties, which to my mind is the only scale for model railways. It would be, for instance, interesting to learn how much of this equipment and the relevant catalogues exist today. No doubt many attics and store rooms still hold their secrets.

Therefore, I consider that there ought to be a society for the protection of vintage models (would anyone care to classify a vintage model?); and I would like to know, through the courtesy of your magazine, what other readers think regarding this subject of preserving models of the past, that will eventually become of great historical interest and value.

As I have stated, perhaps the formation of a society would be the answer, so that these old models and associated literature is not lost to posterity.

P. H. J. Pittam, Leeds 16, Yorks.

For anyone who may be interested, there is a fascinating display—albeit small—of toys and models of the 1900 period in the London Museum, Kensington Gardens, London. Toys and models of the inter-war period, however, don't seem to be represented in museums as yet.—Editor.

Thanks for tanks

AS I am interested in airplanes and armour, it is good to see that you have enlarged your coverage of tanks.

The articles and drawings on both airplanes and armour are fine, and due to Peter Chamberlain's excellent coverage of the Sherman tank I have had my appetite whetted in that I am attempting to acquire one from Tamiya in 1:21 scale. I acquired their Sturmgeschutze and Pz Kpfw III from your recommendations. Please give my compliments to Peter Chamberlain and here's hoping that he may find time and information to give some more coverage to other types of armour.

I am particularly pleased with the format of your articles in that they do service to the historian and modeller in presenting the history of the prototype along with the modelling aspect of the subject.

Joseph V. Callahan, Phoenix, Ariz, USA.

We have had many letters like this from readers, and can assure everyone that tank coverage will continue and will, indeed, be expanded whenever space allows.—Editor.

Making Mounties

FIRST I must congratulate Airfix on the Mark I tank and the American infantry of 1918.

The American infantry can be easily converted into Canadian Mounties by first painting their jackets a bright red and then painting the trousers a dark blue with a thin yellow stripe down the trouser side, painted on when the dark blue is dry. The boots and hats are painted a tan colour.

J. H. K. Murrell, Mitcham, Surrey.

Turret numbers

REGARDING German turret numbers (Letters, April) the system was as follows:

R01 Regimental Commander
R02 Regimental Adjutant
R03 Signal Officer
R04 Regimental Staff Officer
I01 First Battalion Commander
I02 First Battalion Adjutant
I03 First Battalion Signal Officer
I04 First Battalion Staff Officer
II01 Second Battalion Commander
101 First Company Commander
102 HQ Platoon Leader, First Company
111 Platoon Leader, First Platoon, First Company
131 Platoon Leader, Third Platoon, First Company
301 Third Company Commander
741 Platoon Leader, Fourth Platoon, Seventh Company
733 Third Tank, Third Platoon, Seventh Company
1001 Tenth Company Commander (usually in Pz Grenadier Div.)
1023 Third Tank, Second Platoon, Tenth Company

These sample turret numbers should show how the numbering system went in German Panzer units and enable modellers to select suitable numbers for miniature tank regiments. The numbers were usually applied in plain white or red or black with a white outline. Sometimes they were in white outline only.

Axel Duckert, Soborg, Denmark.

Cheap scenery

THERE must be many modellers like myself who, after taking great pains and trouble to make up the Airfix kits, find that, when they come to display them, scenery costs more to produce than the model.

Could I suggest, therefore, that they employ the decorator's gift to the modelmaker—Polystyrene ceiling tiles. With a little ingenuity and imagination these relatively cheap and easy to handle items can be used to produce almost any kind of scenery needed.

For example, take a tile, and with a soft pencil and ruler draw parallel lines about ½ inch apart. Run lightly over these lines with a soldering iron or hot poker (taking care to use a very light touch), and the result, after painting with water or poster colours, is a very realistic ploughed field. Similarly, by sticking two tiles together with paste, hedges and walls can be cut from the sheet and painted as required. With the addition of the Airfix fencing and the odd tree or two (again from tiles stuck together) a good landscape can be produced. Add an Airfix cottage and you have the ideal setting for a battlefield of OO/HO armies or the basis of a farm.

One word of warning—the use of polystyrene cement or enamel paints will dissolve the tile so one must use water-based paints and paste.

Alan L. Playford, London, E.13.

Swiss Ju 52

I RECENTLY purchased the Airfix Ju 52/3M and decided to make it up as the Swiss Air Force version. This kit was excellent, but it did have two small faults. The first was that the engine cowlings were painted steel blue, not red, as stated in the kit. The second was that the antenna, part 85, and the DF loop, part 86, should be omitted in the Swiss Air Force version.

C. L. Jones, Southsea, Hants.

Painting figures

WHILST reading Letters to the Editor in back copies of your excellent magazine I noticed some methods of increasing the life of paint on polythene figures. Perhaps some readers would be interested in another method. Mix some white gouache paint until it is of a creamy consistency, and paint the figures with this mixture. Although a water paint, it will stick with ease to polythene and has the advantage of being quick-drying. When dry, the figure is ready for painting with enamels. The gouache absorbs the oil in the enamel and speeds drying and gives a more realistic texture, as well as increasing the life of the enamel.

Could anyone please give me information on the mixing of field-grey colour for German infantry? I have tried several mixtures, but have been unable to obtain satisfactory results.

P. Shorrock, Emsworth, Hants.

Lerwick serials

MICHAEL Bowyer is to be congratulated on his Lerwick article in the April issue. It is pleasing to know, at last, why this machine was not a success. However, surely the first Lerwick was L7248 and not L7249 as stated in the article?

On the subject of the four DUKWs with the Merryweather ladders, these were called Swans according to an article on them which appeared in *Soldier* magazine many years ago.

M. J. R. Smith, Amersham, Bucks.

Michael Bowyer writes: *Of course L7248 was the first machine—our mistake. The first four (not three) aircraft, L7248-51, had Hercules HE IM engines. L7248, not '49, was used by Saro in an attempt to cure the basic troubles. Apologies.*

Instrument panels

I SHOULD like to pass on to other readers, a simple way of making realistic instrument panels for aircraft.

The required shape of panel is first cut, with scissors, from light gauge aluminium, such as is used for packaging. This is then painted matt black and allowed to dry. Then, using a fine pointed instrument (I use dividers) scribe on the necessary detail. A steady hand helps here, but small errors are surprisingly inconspicuous. Finally fix in position (impact adhesive is best) and touch over the edges with matt black.

The detail is surprisingly realistic, especially when viewed through a transparent canopy: considerably more realistic than the white 'polka-dot' sometimes seen, since full-sized aircraft instruments are almost invariably black, on a black panel, only the numerals being white.

C. A. Jones, London SW15.

'Devonshire' notes

I WAS pleased to read your article on the seventh *Devonshire* conversion. I served in her from 1951-53.

You made one or two mistakes. For instance, the four-inch mountings were abreast the after funnel and not the front one, and in addition, she also carried a Bofor on the starboard side and a Pom-Pom on the port side. There was no director above the bridge.

I hope this information has been of some help to modellers.

A. Cameron, Forre, Morayshire.

M3 memories

WITH reference to Mr A. J. Moore's letter in your March issue about the White M3 Half-Track, it may be of interest to readers to know that these vehicles were not only in use by TA units in 1955—they were still in use in Regular units in BAOR as late as 1959/60. We still had a number of them in assorted roles in 7th Armoured Brigade Group in the Hohne-Fallingbostel area at that time, though it is true they were then being scheduled as obsolete and to be replaced by variants of the 6-wheeled Saracen vehicle. The half-tracks were used in the ambulance role, and also by LADs, REME, as recovery vehicles, for which latter purpose they were fitted with a sort of 'sheer-legs' at the front pivoted to fold over backwards and lie at an angle above the body when not in use. Seventh Armoured Workshops told me that the difficulty in getting spares was largely the reason for phasing these vehicles out of service.

Although well aware of the cost of tooling up for production of new models, could I put in an urgent request for one or two ordinary load carriers—for example, the ubiquitous Bedfords (either QL 4 x 4 or CL 4 x 2) and a 15 cwt Bedford or Morris—also an armoured car, Humber or Daimler.

R. H. W. Wright, Ferndown, Dorset.

Swivel seats

WHILST I was customising the interior of my Austin Mini, I wanted to make swivel seats, but I had no means of this in my spare parts box. I solved the problem by purchasing some press-studs. First, one half of a press-stud is glued to the floor of the car and the other half of the press-stud is glued to the underside of the seat (this can be done with UHU). This assembly is then left for at least 12 hours to dry. After this the two halves of the press-stud can be united by holding the car in one hand and gently pressing the seat containing the press-stud on to the floor containing the other half of the press-stud. The seats will now swivel freely. This method can also be used for making swivelling guns on aeroplanes or boats.

D. J. Shepherd, London N4.

Stirling detail

AS a former aircraft electrician at Sebro's works, Bourn, during the last war, as referred to by Mr Bowyer in the Stirling article (AIRFIX magazine, February), there is one detail missing which may interest readers.

On all the Stirlings converted at Sebro's to glider tugs, where the exit for paratroops was under the fuselage, a bar was fitted which was lowered during dropping. I understand that this was to prevent the static lines swinging up under the fuselage and fouling the tail or tail wheels. The bar was in the form of a rectangular frame immediately aft of the exit hatch and pivoted at the leading edge. It was the full width of the fuselage.

Also, I can well remember a Stirling which came to Bourn for repair, in about 1943, with shark's teeth painted on the nose similar to the Kittyhawk style.

D. E. J. Twinn, Cambridge.

Cheap pictures

READERS may be interested in how to take successful photographs of their Airfix kits without having to own any expensive equipment.

Most opticians have spare spectacle lenses and these may be brought for about 5s each. The lens to ask for is a three Diopter lens, which you attach to the lens of your camera by means of sticky tape or a suitable collar fitting if you have one.

The model or models are set in the required position and the camera is set to infinity and placed in a position exactly 13½ inches from the model. This is most important as the picture will not be focused properly if it is not.

M. Mudd, Harwich.

Effective dog-fight picture involving Airfix models was taken by reader M. Mudd using the method he explains here.

Flail chains

WITH reference to Mr Blockley's letter in October, 1966, magazine regarding the making of the chains for a Sherman Crab in the motion of sweeping, I think I have found an easier method. If the felt material round a pipe cleaner is burnt off, a stiff wire chain is left. This would save the bother of stiffening any other chain.

Alasdair Sutter, Angus, Scotland.

Pin writing

IN the February, 1967, issue of AIRFIX magazine there was a picture of a P-39Q model and a note saying that the aircraft's and pilot's name had been written with a pin on the edging of a transfer sheet. Please could you explain fully how this was done?

C. Pleasance, Thornton Heath, Surrey.

Several readers have asked this same question. Briefly, the method is to thin down matt white plastic enamel (or whatever colour is desired) to about half its normal consistency.

Then a small pin is used lightly like a pen, though held pretty well vertically, and the name written in the desired style. By 'clear edging of a transfer sheet' we meant the varnished waterslide area which is often left when transfers are closely trimmed before application. Write the name on this — though several attempts are usually needed to get the style correct — leave the paint to set, trim round the name, and apply in the normal way by soaking in water. This method is particularly useful for depicting names which were applied in 'script' style on the subject being modelled. By writing on the transfer sheet you avoid the possible mistakes which could be made by attempting to paint small names and stencil marks straight on to the model.—EDITOR.

Mercedes racer

HAVING purchased the Airfix model of the 1904 Mercedes, I thought car enthusiasts would like to know of a simple conversion.

Firstly one removes all the lamps, mudguards and mudguard supports. Then the model is painted white with a large black 4 on the radiator front and two

Continued on next page

Letters—continued

smaller 4s on each side of the bonnet; two spare tyres are cemented behind the seats. This conversion turns the model into Jenatzy's 1903 Gordon-Bennett race winner.

C. P. Brain, Old Coulsdon, Surrey.

This suggestion ties in nicely with this month's Wheelspin feature—we are planning a more detailed coverage of racing old timers in the near future.—EDITOR.

Rhodesian Hunter

LOOKING through your September, 1966, issue, I noticed an error in the letter on the Rhodesian Hunter.

It stated that the upper surfaces of our Royal Rhodesian Air Force Hunters are dark green and dark earth, but the correct camouflage is dark green on light grey. The under surfaces are silver, not duck egg blue as stated. The rest of the details are correct.

D. West, Salisbury, Rhodesia.

DUKW conversion

I HAVE come across an interesting conversion in an old magazine. It is an adaptation of the DUKW by the US Marines as a carpet layer.

The wire mesh carpet is stowed in accordion pleats on the stern and passes over five flattened arches which extend from the rear of the driver's compartment to about one or two feet in front of the vehicle where they end and are joined by a crossbar level with the deck. The arches clear the windscreen by about a foot. The two outer arches are supported by a support on the edge of the deck level with the front of the driver's compartment and another halfway between it and the bow. A strut across the DUKW stretches from the foot of each support to three-quarters of the way up the opposite one, while on each side of the vehicle struts run fore and aft from between the supports to three-eighths of the way up them. The vehicle was on trials in 1950.

I would like to contact Mr R. H. Bishop of Weymouth, who had a letter published in the November, 1965, issue, as I would very much like to exchange information with him.

Alan C. Rogers, Dorchester.

We don't think this DUKW carpet layer was ever adopted for service, but a similar conversion carrying a bobbin was used in NW Europe in 1944-45 in small numbers. We don't have a record of Mr Bishop's address—perhaps he could contact us?—EDITOR.

Canvas finish

I WAS wondering if readers would like to know how to produce more realistic finish for tarpaulins and tilts. I have found that the tissue supplied in the Renwal 'Fabulous Flying Machine' kits and/or the 'World War 1' kits, when applied, represents canvas very well because folds, wrinkles, etc, can be worked in before the glue dries. Anyone with any of this stuff left over will find it excellent, therefore, on Airfix tanks and trucks.

Warner Hall, Edmonton, Canada.

Pen-friends wanted

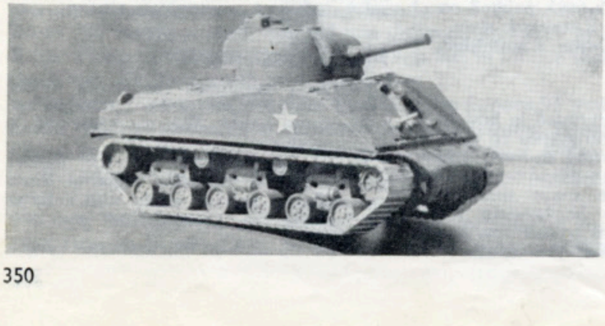
THE following readers have written to the Editor requesting pen-friends: Neil Harris, 42 Morwick Road, Warkworth, Morpeth, Northumberland, wishes to correspond with a pen-friend in the 10-12 age group living in USA, interested in aircraft and military models, and willing to exchange kits. Peter Connolly, 50 Castle Park, Clondalkin, Co Dublin, Irish Republic, would like to hear from anyone his age (13) in Western Europe interested in World War 2 aircraft kits and civil aviation in general, and interested in exchanging kits. Bennie Kalkhoven (13), Randveen 323, Den Haag, Holland, would like a pen-friend of his own age from Britain. He writes and reads English, and is interested in plastic models generally. Akira Kikuchi, 1-13-13 Motobuto-cho, Urawa-City, Japan, who is a member of Urawa Plastic Model Club, would like to hear from any plastic modellers anywhere in the world wishing to exchange news and data of mutual interest. Ho Boon Thong (15), 15b Albert House, Singapore 7, would like to correspond with any boy of his age in Britain interested in model aircraft. Stephen White, Alexandra Ave, Wentworth Falls, NSW, Australia would like an English pen-friend aged 12-13½ interested in modelling plastic aircraft and cars. Josef Cudak writes on behalf of the Brno Model Club, who intend to start a slot racing section, asking if any readers in Britain would be willing to exchange cars and accessories for East German kits, aircraft and car magazines, or Czech cut-glass. He can be contacted at Novotneho 28, Brno-Fucikova ctvr, Czechoslovakia. Interested readers are invited to write direct to the addresses given.

Military modelling—continued

the hull rear and one can be made up from plastic card or scrap to a width of 28 mm (again the dimensions are not critical) and cemented in place. Sometimes another stowage box was carried across the hull front.

You thus have a Sherman Mk IC and for anyone who wants to try the more ambitious VC, Bellona do a useful scale drawing. However, I thought it would be interesting to ring the changes yet again and make a Sherman Hybrid IC with the combination cast/rolled armour front fitted to late production Mk Is. All the foregoing instructions apply in this case, but before assembling the hull, the cast nose effect must be achieved. This is done by filing off the rows of bolts and all the detail from the upper hull front. The entire hull front, except for the nose, is then liberally coated in plastic body putty and smoothed with the fingers or a knife to give a uniform coverage as far back as the mushroom vents each side of the hull hatches. After leaving the whole lot to set hard for at least 24 hours, file and sand the entire area to give the desired cast effect, not forgetting to round off the edges and corners. The photograph shows the idea, I think. Then proceed as before, not forgetting the plate over the deleted machine gun aperture.

Completed model of the M4 with 105 mm howitzer and HVSS.



The Sherman 'B'

LAST of all something a little more ambitious which again involves re-arming your model, this time with the 105 mm howitzer. So armed the Sherman I became the IB in British service and in its simplest form this conversion involves only the turret which needs a new gun barrel, a cylindrical mantlet from scrap plastic—or by covering the kit mantlet with card—and a new cupola as shown in the drawing. You also need to add a second hatch from card in the position shown, and a second ventilator from scrap plastic.

While the cupola *can* be made up from scratch you'll find that an excellent one of just the right size and pattern can be cut out from the hull of the Roco M40 model if you have one to spare. Which leads to the suggestion that you 'cannibalise' a complete M40 and take this conversion to its logical conclusion as shown in the drawing. In other words, fit your model with HVSS and wide tracks by incorporating the complete moulded track and suspension from the M40 in place of the track and suspension supplied in the kit.

This is easily done, but such a conversion then means that you must fit your model with 47 degree hull front, also shown in the drawing and on my model. This involves filing down the existing hatchways, cutting out a new hull front from plastic card, cutting out a new section of plastic card to cover the old driver's hatchways, and adding new oval hatches from card. Finally fill in the front edges of the hull sides to match the new angle of the hull front and your model takes on a radically different shape.

Next month, I'll be taking this Sherman conversion theme one stage away from the basic M4. Until then try your hand with the drawing and pictures as a guide.

CLASSIFIED ADVERTISEMENTS

RATES:—5d. per word. Minimum charge for each insertion 5s.

WANTED

Wanted: Unassembled Tamiya M.48 Patton with two motors. M. Slota, 324 Rochdale Road, Greetland, Halifax, Yorks.

Wanted: Airfix Magazines, February 1964. Mint condition. State price. Dinan, 34 Stanhope Gardens, London, S.W.7.

May 1963 Airfix Magazine. Have for exchange October 1962, and September 1963 issues. Marlow, 78 Northampton Road, Wellingborough, Northants.

Airfix Magazines, August—December 1963 (inclusive). Byrne, 58 Brooks Road, Wylde Green, Sutton Coldfield.

Airfix Magazines, No. 1—September 1965 (inclusive). Please state price. Mills, 5 Hill Close, Ballykelly, Co. Derry, N. Ireland.

Urgently Wanted: Kit or made-up model, Boeing B.47 Sratojet. Good price paid for either in reasonable condition. State price to D. P. Judge, 66 Rouge Bouillon, Jersey, Channel Islands.

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Wanted: 'Britains' metal soldiers, all types. Gun teams, wagons, bands, etc. by collector. 13a Albert Parade, Eastbourne.

Wanted: Unmade Merit Bristol-Bulldog kits. Twycross, 8 Armson Avenue, Kirby-Muxloe, Leics.

Part exchange unwanted trains all gauges, Peco Streamline Track in 'O', 'OO' and 'N'. Triang Super 4. Scalextric Plexytrack, Meccano, Model Boats, Yachts. Good models. Cash available. Beatties of London, 112 High Holborn, London, W.C.1. Manchester and Southgate (Mail Order).

Airfix Magazines, Vol. 1, numbers 1—6, July 1961, December 1964, all or singly 3/- copy. All correspondence answered. R. P. Stubbs, 198 Wellington Road, Wainuiomata, New Zealand.

FOR SALE

Airfix Magazines, 48 copies from No. 2. Good condition. £5 o.n.o. Owin, 27 Webster Gardens, Ealing, W.5.

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Quality Aircraft Photographs: 1/6 p.o. for specimen and lists—'Aviation Photographs', 28 Silksby Street, Coventry. Publications dept. specialise in rare kits, books and Aviation curiosities, personal service for model makers, 6d. for sales list. R.A.F. Roundels ⅜ post-war type, 45 on sheet—4/- per sheet, two sheets 7/6, post, packing free, 'Aviation Publications', 1 Copland Place, Tile Hill, Coventry.

Half price kits! Fantastic offer! Send me £1 (plus 2/6 postage and packing) and I will send you a parcel of 1/72 in. Aircraft kits worth £2. No catch, I'm just a lunatic, but my selection only. Fullerton, 90 Burnt Ash Lane, Bromley, Kent.

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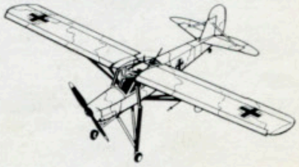

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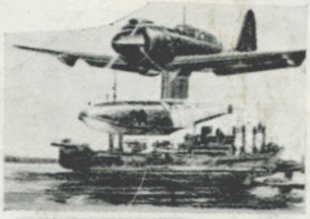

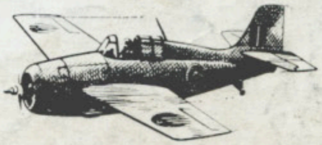

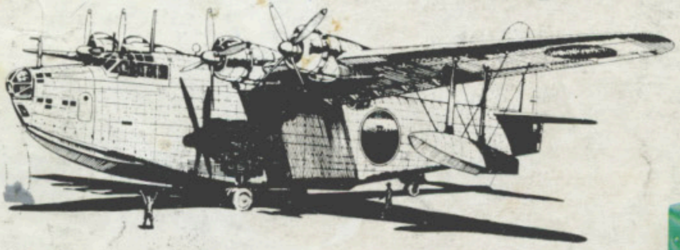

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